MARCH 17, 1975

Commerce Today

Where We Are On The Road To Metric

FROM THE
SECRETARY

Coal Is On The Comeback Trail

King Coal, once the supreme ruler of Energy Land, who was deposed by his cousins Oil and Natural Gas, may someday contend for the throne again.

The simple reason is that there is a lot more coal than oil and gas left on this earth. The United States, for example, has a coal supply that will last several hundred years, long beyond the time when our oil and gas reserves are expected to be totally exhausted. It is estimated that we have over four times more energy in coal than the entire Middle East has in oil.

But the growth of coal as an energy source is not expected to wait until our oil and gas are depleted. President Ford's energy program, for example, includes two important provisions that would boost coal usage in both the near and intermediate term.

One involves a request to the Congress to amend the Clean Air Act and the Energy Supply and Environmental Coordination Act of 1974. These actions could reduce the need for oil imports by 100,000 barrels per day in 1975 and 300,000 barrels in 1977.

The amendments would make possible conversion of power plants from oil and gas to coal by eliminating certain environmental limitations. A plant could convert as long as its own emissions do not exceed ambient air quality standards.

The President also has requested passage of a surface mining bill which strikes a balance between our environmental and energy needs. And he has directed the creation of a new coal leasing program on federal lands, with appropriate environmental safeguards.

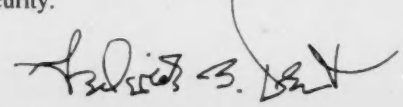
For the intermediate term—1977 to 1985—the President announced the National Synthetic Fuels Commercialization Program that will rely heavily on the use of coal. The program will insure the production capacity of at least one million barrels per day equivalent of synthetic fuels by 1985.

The production techniques, which are now nearing commercial application, will yield a wide range of clean solid, liquid and gaseous fuels derived from coal. Oil shale also will be used.

Federal incentives will be offered to producers. These may include price guarantees, purchase agreements, capital subsidies, leasing programs and other measures. All contracts will be granted competitively. The program will be launched under existing legislative authorities, but new authorities will be sought if necessary.

In 1900, coal supplied 90 percent of the nation's energy consumption. The growing use of oil and gas dropped that figure to 38 percent by 1950. Today, it is only about 17 percent.

But King Coal is now on the comeback trail. He packs a lot of power—just the thing we need—and we should welcome his return, which lends strength both to our economy and our national security.



Commerce Today

Vol. V, No. 12, March 17, 1975

2 Economic Highlights

Change in business inventories in first three months of the year will provide an important indicator on the role of this sector of the economy during the expected recovery in the latter half of 1975.

4 Newsmemo

5 Businesses Spur National Drive Toward Adoption Of Metric System; Governments Follow Suit

With the U.S. the last major economy not on a metric basis, large corporations are making the turnover in increasing numbers; only question is "will the shift be systematic or haphazard?"

9 NTIS Trains Foreign Agents To Sell Technical U.S. Publications In Their Homelands

Three-week program acquaints trainees with all phases of NTIS operations and marketing techniques; program seen as catalyst to spur technical progress in developing nations.

10 Report On 1974 United States World Trade By Area Shows Gains Almost Everywhere, Offset, However, By Oil Deficit

Strong U.S. global trade position last year helped hold down effect of huge imbalance of $12.3 billion with the petroleum exporting countries.

13 Energy Management Digest

14 Domestic Business Report

Major maritime nations around the globe subsidize their shipping industries to the tune of $2 billion per year—Pollution control expenditures by business, government hit $18.7 billion in 1972—Industrial boilers, big energy users, subject of FEA study—Consumer electronics products producers concentrate on raising sales levels during 1975—National, local units join in attack on rising incidence of arson—Law of the Sea meeting in Geneva seeks meaningful world treaty—From sweep-up man to owner, with OMBE help.

22 International Commerce Report

U.S., Iran set $15 billion trade goal—Quarterly report on U.S. share of world's manufactured exports—Trade mission assesses electronics markets in Spain, Switzerland—Economic trends in the Soviet Union, Canada, United Kingdom, Guatemala—Reviews of international business reports—Calendar for World Traders—Investment, trade opportunities worldwide.

COVER: *Road signs like this one are springing up along the nation's highways as some of the states begin to follow U.S. corporations' lead in switching gradually from the English to the metric system of measurement. Update on the progress of the switch begins on page 5.*

U.S. DEPARTMENT OF COMMERCE

FREDERICK B. DENT
Secretary

JOHN K. TABOR
Under Secretary

BASIL R. LITTIN
Special Assistant to the Secretary for Public Affairs

THOMAS A. BELL
Director of Communications

RICHARD BALENTINE
Editor

CLARENCE M. ZENS
Associate Editor, International Commerce

ARTHUR McDERMOTT
Associate Editor, Domestic Business

AMERICO A. W. FAVALE
Graphics Coordinator

Staff Writers: ***Douglas F. Carroll, Felix Cotten, Margaret L. Hanson, Leslie Wilder.***

Published biweekly by the U.S. Department of Commerce, Washington, D.C. Annual subscription rate $29.80 ($7.45 additional for foreign mailing, $5.75 additional for domestic air mailing). Single copy $1.15. Make checks or money orders payable to Superintendent of Documents and mail to Superintendent, U.S. Government Printing Office, Washington, D.C. 20402, or to any U.S. Department of Commerce District Office.

All subscription inquiries and address changes should be sent to the Superintendent of Documents, at the above address. This is the central distribution agency for U.S. Government publications.
Microfiche copy available at $1.45 per issue from National Technical Information Service, Springfield, Virginia, 22151. Other inquiries should be sent to the U.S. Department of Commerce, 14th Street and Constitution Avenue, Washington, D.C. 20230.

Contents of this publication are not copyrighted unless indicated, and if not so indicated, the articles may be reproduced in part or in full without any prior consent. The Secretary of Commerce has determined that the publication of this periodical is necessary in the transaction of the public business required by law of this department. Use of funds for printing this periodical has been approved by the Director of the Office of Management and Budget through August 31, 1976.

First Quarter Change In Business Stocks Will Provide Key Indicator On Recovery

Economic Highlights is prepared by James L. Pate, Assistant Secretary of Commerce for Economic Affairs.

The change in business inventories during the current quarter will provide a very important indicator of the role of business stocks in the economy during the remainder of 1975. Inventories in recent months have been very high in relation to sales, and an adjustment is now under way. The speed with which this adjustment proceeds in the early months of the year will have an important bearing on the expected recovery in the latter half of 1975.

The rate of stock building steadily decreased during the first three quarters of 1974 following a record accumulation ($28.9 billion at an annual rate) in the fourth quarter of 1973—a period of dislocations caused by the oil embargo. The rate of accumulation rose again in the fourth quarter of last year but this was due primarily to a large swing in automobile inventories.

The surge in automotive stocks, $4.5 billion at an annual rate, after adjustment for inflation, in the fourth quarter of 1974 was even larger than the embargo-induced rise in the fourth quarter of 1973. The auto market suffered greatly from consumer worries over the energy problem, rising unemployment, and price increases on the new 1975 models. By contrast, auto inventories had declined in the first three quarters of the year.

In an effort to surmount the problems of mammoth inventories and deserted showrooms, auto manufacturers cut back production and instituted a program of direct rebates to consumers. Preliminary data indicate that they were moderately successful in reducing dealers' inventories. If automobile dealers experience sluggish sales in the months ahead as a consequence of the January and February sales "borrowed" from later in the year, they will have to make an extra effort to trim their inventories. Many dealers also will be seeking a better balanced inventory since their stocks contain an undesirably high proportion of large autos as a result of the rebate program.

For nonautomobile manufacturers, problems with current inventory levels have exhibited different characteristics. The composition of inventories changed in the latter part of 1974. Many material and supply scarcities no longer exist. Some manufacturers were caught by surprise and now find themselves with more than adequate material and supply inventories. It is doubtful that manufacturers (with some exceptions such as steel) would plan any substantial additions. With the slowdown in sales, manufacturers are now seeing finished goods accounting for an increasingly greater proportion of inventory accumulation. In general, most manufacturers probably will await reinforcement from a turnaround in new orders before they attempt significant stock building. For others, such as textile manufacturers, actual liquidation will take place.

On the other hand, most retailers indicate satisfaction with the adjustments that have already taken place in their inventories. While considerable accumulation in trade inventories occurred during 1974, most of the excess has been worked off through unusual mid-winter clearances. Moreover, retailers seem inclined to delay even seasonal stock building until a recovery in retail sales is well established.

A popular yardstick for the health of the inventory situation is the inventory/sales ratio. However, the use of this measurement has a major drawback in that a change in either one of its two components can cause an adverse change in the series. Depending on whether a sales decrease or an inventory increase is the major contributor to an increase in the ratio, the solution for the attainment of a lower ratio would be entirely different.

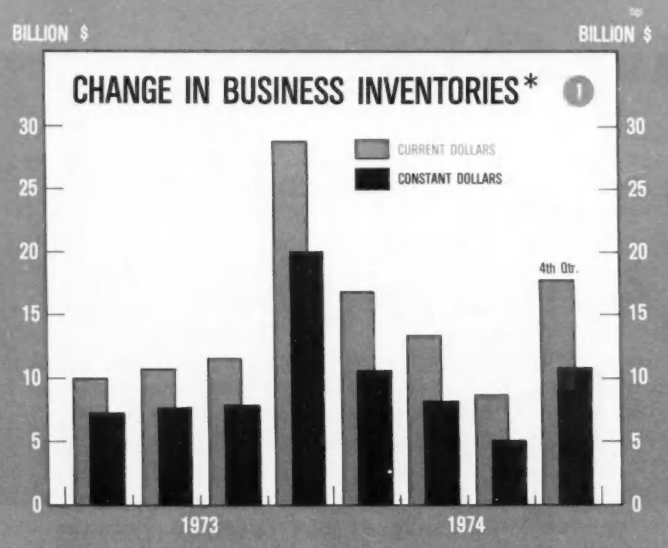
In order to focus on the inventory component, real business stocks can be related to potential GNP (GNP in a full capacity situation). As the chart indicates, sluggish sales performances in 1974 caused the increasingly high inventory/sales ratio rather than excessive inventories (with the exception of the automobile sector). A turnaround in economic activity could bring the ratio back to normal levels in a fairly short time span.

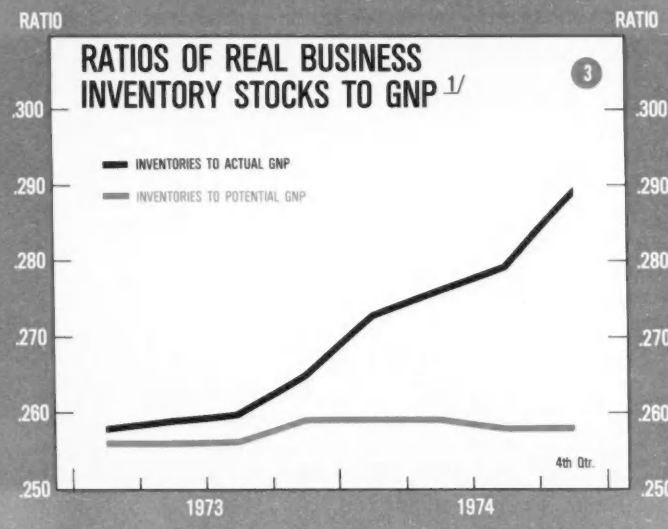
The continuing declines in new orders for manufactured goods have reinforced businessmen's conservatism toward stock building. New orders have declined for five consecutive months. In addition, industries are cutting down their backlogs of unfilled orders. A low rate of plant and equipment utilization also has resulted in disappointing new orders for capital goods. According to the most recent survey, however, capital expenditures will pick up in late 1975.

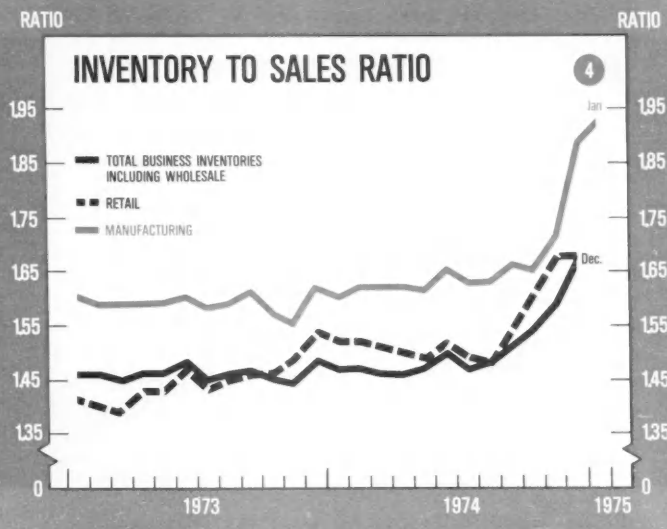
Sales at the retail level, after adjustment for inflation, have been in a declining trend for almost two years. The large declines in auto sales, unfortunately, have not been offset by any strong sales gains in other sectors. After a slightly improved performance in the first two months of the year, however, there were some optimistic feelings among retailers concerning the spring quarter.

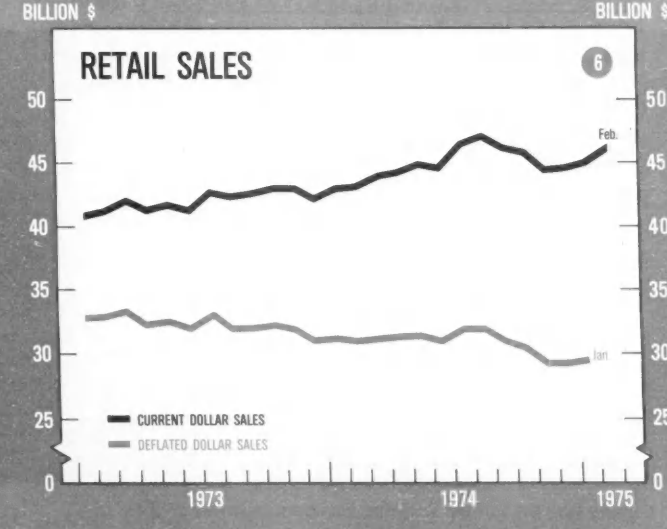
A renewal of consumer confidence could well be engendered by the recent softening of prices. Price declines, which have been evident at the wholesale level, are now beginning to work themselves through the latter stages in the production process. Consumer foods at wholesale have shown the greatest improvement. Retailers are also resorting to fairly aggressive sales tactics. The most outstanding example is the auto rebate program, and similar promotions and price cuts have been spreading to other sectors such as consumer durables and apparel.

In sum, inventories are proceeding through a crucial adjustment period. Prospects for recovery would be enhanced if a major part of the inventory adjustment were achieved in the first quarter. It now appears that the amount of adjustment later in the year will be of modest proportions and will not produce a significant negative impact on economic growth.









ALL DATA SEASONALLY ADJUSTED

* ANNUAL RATES

1/ STOCKS, END OF QUARTER; GNP, ANNUAL RATE

Newsmemo

Deadline is approaching on a survey of foreign direct investment in U.S. companies. Replies are due by April 30 to the report form sent to more than 10,000 businesses by the Commerce Department's Bureau of Economic Analysis. Responses have been made mandatory by the Foreign Investment Study Act of 1974. Companies required to report are those controlled directly or indirectly by a foreign owner at any time during the year 1974, with control defined as ownership of 10 percent or more of voting securities. Companies still needing report forms and instructions may write: International Investment Division, Bureau of Economic Analysis BE-50 (LM), U.S. Department of Commerce, Washington, D.C. 20230.

Foreign direct investment in the U.S.--to be cheered or feared? Under Secretary of Commerce Tabor gives his view: "That capital from all over the world seeks out the U.S. is plainly and simply proof that the hard-headed investors of the world are 'betting' on the United States to succeed. And their bet on us gives them a vested interest in our success. Hence, we should be very careful about discouraging the flow of capital to the United States." Tabor believes that the existing body of U.S. laws and administrative practices can guard against undue outside influence over the U.S. economy.

Mayors have a close-up view of the problems and pitfalls of minority business. They will have a chance to share such knowledge at a series of meetings that begins this week in Miami, and then moves to Hartford, Kansas City, Dallas and Washington. About 15 to 20 mayors are expected at each meeting. Commerce's Office of Minority Business Enterprise (OMBE) has enlisted the U.S. Conference of Mayors to sponsor this effort. Last year the Conference received a $270,000 OMBE grant to assist minority business growth.

Large-scale cargo thefts are crimes against all, since it is the consumer who must foot the ultimate bill. We listen, then, as U.S. Customs Service official Lou Tyska explains three factors common to such thefts: 1) Confusion, with large numbers of people and equipment offering criminal cover; 2) Conspiracy, with inside contacts giving thieves tips on value and location of target cargoes; 3) Bribery, with money given to workers, businessmen, officials and truckers to cut the risks. Tyska tells management to fight back by 1) beefing up security, and 2) staying in control at all times.

New products developed in the U.S. can make news abroad. Many foreign correspondents working in the U.S. are looking for such news, or other business stories. Nearly 1,000 correspondents representing 556 enterprises in 74 countries are listed in the January 1975 issue of the Resident Foreign Media Directory published by the U.S. Information Agency's Foreign Press Centers. Copies are available without cost, while they last, from: U.S. Information Agency, I/R, Washington, D.C. 20547.

An occupational health standard ordered by OSHA is heading for a Supreme Court test. OSHA, the Occupational Safety and Health Administration, had set workplace exposure limits to vinyl chloride emissions last fall. The Society of the Plastics Industry and a number of polyvinyl chloride producers sued to have the standard set aside. A three-judge panel of the U.S. Court of Appeals in New York unanimously upheld the OSHA action and ordered it put into effect April 1. The Court of Appeals decision is not being accepted by the plastics industry. A motion filed with that court asking for a stay of execution has been denied. Next legal step would be a review by the U.S. Supreme Court. If this is carried out, it would be the first full court challenge for an OSHA regulation.

Franchising, generally an expanding element in the U.S. business scene, is now encountering legal challenges over franchisor-franchisee tie-ins. In 1973 the Federal Trade Commission ruled that the requirements on franchisees to buy various supplies from the parent firm, and to accept suggested resale prices for food, constituted illegal restraint of competition. Now the FTC is investigating about 75 fast food franchisors, asking written reports on whether they require franchisees to buy goods or services from designated sources, the amount of such transactions, and the justifications for them.

Commerce Today
Vol. V, No. 12
March 17, 1975

U.S. Metric System Seems Certain, But Will It Come On Schedule?

"Whether or not the United States will join the majority of the world community by converting to the metric system is to be decided in the next couple of years." Thus began a feature story in the inaugural issue of *Commerce Today*, dated October 19, 1970.

The author of that story was right. A little more than four years later the issue has been decided, though not perhaps in the manner he expected. Without waiting for an official pronouncement, American industry has decided that more than 100 years of debate on the issue is enough—America is going metric!

The trend toward growing use of metric in U.S. manufacturing industry, not too noteworthy when Commerce's National Bureau of Standards issued its U.S. metric Study in 1971, has become a torrent.

Starting from a foothold in companies heavily involved in export trade such as farm and heavy construction equipment, the metric trend has spread to a large part of the automobile industry. Ford Motor Company first introduced a European-designed, metric-dimensioned engine in the "domestic" Pinto automobile; then built the first U.S. metric engine plant in Lima, Ohio, to fabricate that engine; then, in the fall of 1973, introduced the first U.S.-designed metric engine in the new Mustang II.

Meanwhile, General Motors decided in January 1973 that all new parts and components for its automobiles would henceforth be designed in metric. With its 40,000 or so suppliers, it is obvious that GM, through this decision, is going to extend considerable influence on U.S. industrial practice in the direction of using metric measures and metric dimensioned standards.

IBM has also announced a program to implement the use of metric measurements throughout that corporation, and the list of companies making such a move lengthens almost weekly.

Coordinating unit

The American National Metric Council was formed in 1973 to plan and coordinate a system of voluntarily increased use of the metric system in the U.S. industrial complex. Its coordinating activities are being carried out by five committees, each representing a basic economic area. Each coordinating committee is further divided into sector committees; there are about 30 such sector committees, which were organized and began operation in 1974.

ANMC issued its first annual report in January, and its first annual meeting, devoted to "Managing the Change to Metric," is being held in Washington, D.C., from March 17-19.

Similarly, the National Association of Manufacturers has formed a Metric Task Force to help firms develop the capability for metric conversion. In addition to the NAM, many other key associations have adopted pro-metric resolutions, including the U.S. Chamber of Commerce, National Education Association, American Home Economics Association, and the National Grange.

Even more markedly than four years ago, the United States is an island in a metric sea. Every other major economy in the world is either metric already or in the process of converting to metric. This country's only companions in its non-metric status are Brunei, Burma, Liberia and Yemen.

The failure to use metric units and engineering standards is a competitive disadvantage overseas to the acceptance of U.S. products that are "measurement sensitive." A 1971 directive of the Common Market requires that by 1978 U.S. exporters to the nine Common Market countries indicate dimensions in metric units. While this directive does not require that products be produced in conformity with metric standards, it does require that metric language be used to describe the product, and will allow dual dimensioning only if determined not to be confusing. Compliance will be judged by each importing nation.

No significant problems

Although it is going to require some time and effort to forget the old ways of measurement and to use up stocks of parts designed to customary measurements, all of the experience of other countries that have made or are making the change reinforces the belief that Americans will not encounter significant problems in going metric in an orderly way.

No one belittles the magnitude of the metrication process. It will mean that, to the extent that this country uses weights and measures, we will all have to learn to "think metric." We must also face up to and minimize confusion during the transition period. Industry will have to retrain workers in those areas of measurement that they encounter in their work.

In fact, it is this retraining need, and also the eventual obsolescence of worker-owned tools, that form the basis of American labor's concern about "going metric." This is a legitimate concern, but it can be resolved here as it has been resolved by the British in their metrication process, as well as by our own industries which have already made the change.

How will the change be made? Any change in the customary measurement language of America cannot be performed

Growing Rollcall

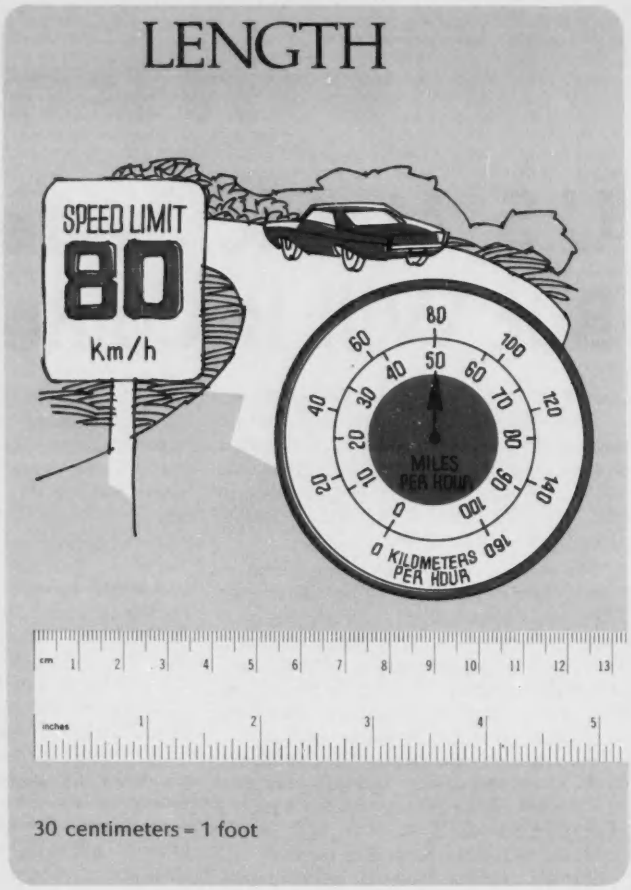
Many industrial firms have announced plans to convert to the metric system, including:

Motor vehicles—Chrysler, Ford, General Motors, Mack Trucks;

Farm and construction equipment—Caterpillar Tractor, Clark Equipment, International Harvester, John Deere;

Computers and other office equipment—A. B. Dick, Honeywell, IBM, Minnesota Mining and Manufacturing, Xerox;

Others — Allis-Chalmers, Armco Steel, Brown and Sharpe, Dow Corning, Edgecomb Steel, Exxon Research and Engineering, Firelands Community Bank (Huron, Ohio), Firestone Wire and Cable Division, Grumman Aerospace, Hewlett-Packard, Hughes Aircraft, Lamsons & Sessions, New England Medical Center Hospital, Otis Elevator, Regal Beloit, Rockwell International, Seven-Up, Travelers Insurance.



by the government. It can be accomplished only by the cooperation of consumers, workers, businessmen and women, teachers, engineers, and people in all other sectors of our national life working together. In fact, just as industry should plan its own metrication, so should home economists plan metrication in the home and educators in the schools. Such widespread cooperation can be obtained only by means of a well-planned, coordinated national metrication program as embodied in the legislation that was passed by the Senate during the 92nd Congress.

Legal since 1866

The Congress passed a bill legalizing use of the metric system in 1866, but since then more than 100 proposed bills that would have required conversion to metric have failed to become law. After coming very close to passage in the last Congress, metric legislation has once again been submitted to the current session. Prospects for passage appear excellent. However, pass or fail, its only impact will be to influence whether the conversion is smooth or haphazard, because the metric system is coming no matter what.

Presently, the increase in metric use in the United States is proceeding in a piecemeal and unplanned way, with individual companies making the changeover when each deems it advantageous to itself to do so. From the point of view of these individual companies this may or may not be too bad a procedure. But in the complex U.S. industrial structure in which fully half of the components in the manufactured product of even our largest companies is supplied from outside the company, and to a great extent if not predominantly by "small business," this unplanned and uncoordinated changeover to the metric system is unfair to the companies that supply standard parts and materials throughout the manufacturing industry.

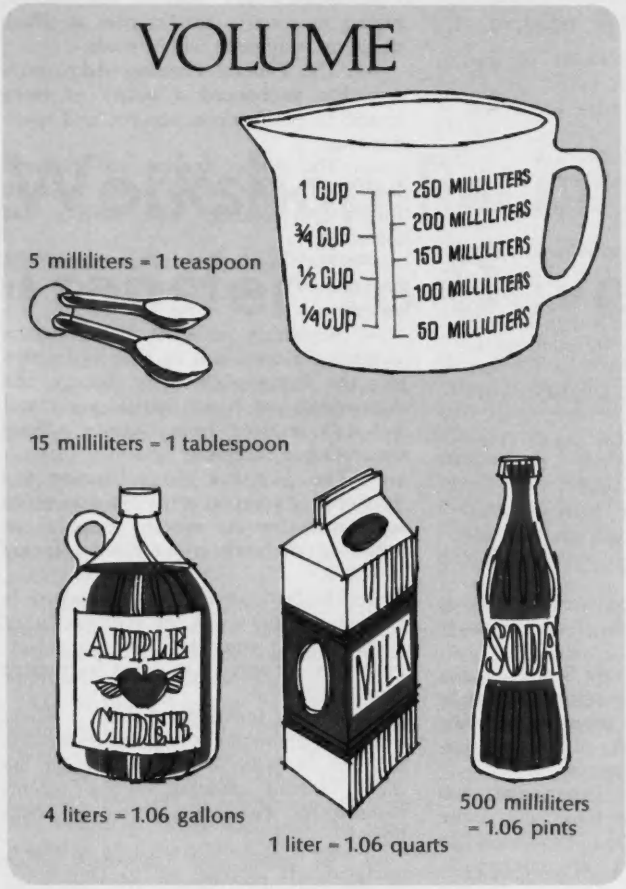
In simpler terms, this is a version of the "chicken and egg" dilemma—companies that incorporate metric standard parts and materials in newly-designed products or components should do so only after standard parts and materials are readily available at reasonable cost. But the manufacturers of standard parts and materials will be able to supply them readily at reasonable cost only when these "off-the-shelf" items can be supplied to a major sector of industry rather than to one company that decides it wants to make the changeover.

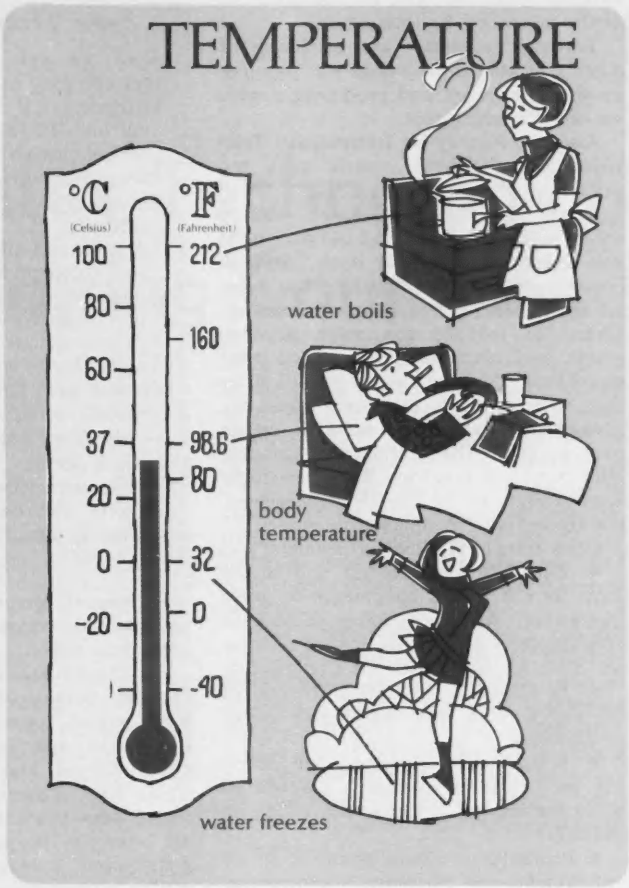
The changeover should be synchronized so that metric standard parts and materials are indeed available on schedule at the time when these items are scheduled to be incorporated in machinery and devices of all types in which they are components. This synchronization can come only from careful planning on an economy-wide basis. This coordination is what national legislation would provide.

For the immediate future, and indeed for several years, metric dimensions will be used dually with customary dimensions, and usually a conversion from customary to metric will be involved. Common sense must prevail. For instance, a 2 by 4 (inches) does not become a 50.8 x 101.6 (millimeters). Two separate and distinct points should be noted regarding this example. First, "2 x 4" is really a name for a popular size of lumber, and a name need not be changed. Secondly, if it is desirable to give the metric dimensions of the "2 x 4," use a reasonable number of *significant* figures—5 by 10 centimeters is appropriate.

What will it cost?

The gross cost of going metric is impossible to determine with any accuracy. This was the conclusion of the 1971 U.S. Metric Study and also of those countries now converting (United Kingdom, Canada, Australia, South Africa, and New





Zealand). If by "cost" is meant the net cost after taking into account benefits, the answer is close to zero dollars, and very likely less than zero dollars if, as expected, the country follows the course envisioned in the legislation now before the Congress. This legislation provides for a planned, voluntary changeover, with changes to metric to be made only when they are compensated by benefits. Under a planned changeover, as provided in pending legislation, the costs will be less and the benefits greater—and be realized earlier—than under the haphazard changeover now in progress.

No alternative

The point to be made, however, is that the country is already drifting to metric, thus the metric costs, whatever they are, are going to occur. Realistically there is no alternative of *not* spending the money by *not* going metric.

While it did not enact major proposed metric legislation, the 93rd Congress did pass a measure giving "metric" a major boost in the area of education. On Aug. 21, 1974, Amendments to the Elementary and Secondary Education Act of 1965 were signed into law authorizing, among other things, $10 million for metric education in each of the three fiscal years beginning July 1, 1975. The money is to be spent for projects directed by the U.S. Office of Education.

The Act contains these statements: "Increased use of the Metric System in the United States is inevitable, and such a metric system will become the dominant system of weights and measures in the United States;" and "It is the policy of the United States to . . . prepare students to use the Metric System of measurement. . . ."

Twenty-five states have had some type of formal action by their state legislature and/or state school board. School boards in 15 of them have adopted "go metric" resolutions (Alabama, Delaware, Idaho, Maryland, Michigan, Nevada, New Hampshire, New Jersey, North Carolina, Ohio, Oregon, Pennsylvania, Virginia, Vermont, Wyoming). Similar action by the South Dakota board is pending.

Seven state legislatures have enacted laws directing action in education (Colorado, Hawaii, Louisiana, Minnesota, New Mexico, Utah, Virginia). In Alaska, the State Board verbally directed its State Department to plan the change; in California, the State Superintendent of Public Instruction announced the change; in Arizona, the State Board of Education adopted a Metric Education Plan for the state.

The U.S. Office of Education funded an Interstate Consortium on Metric Education. Under this project administered by the State of California, representatives of 25 states, the District of Columbia, and several territories (all with some form of state textbook adoption) met to develop

Instant Expert

Become an instant authority on the metric system with the National Bureau of Standards' Metric Kit.

The kit includes a pocket-sized metric conversion card; a six inch/fifteen centimeter ruler; a "Brief History of Measurement Systems" with a full color 10x15 inch chart depicting the modern metric system; a ten-page booklet listing references to further metric information; an article dealing with the specifics of the changeover to metric, and a sixteen-page illustrated booklet outlining the changeover in easy-to-understand terms.

Order NBS Special Pub. 41 from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

uniform guidelines for the adoption of metric education by their states.

Textbook publishers and producers of other educational materials are jumping on the bandwagon and producing a wide variety of teaching aids.

Also, the Agency for Instructional Television has designated metric as a top priority area.

Road signs giving distance and/or speeds in both metric and customary units are appearing in several states. A Task Force on Metric Coordination has been set up in the Federal Highway Administration to monitor conversion developments and plan for the eventual total switchover. The unit has notified all states that, whereas metric distance markers are permissible, speed limit signs in metric only are not. The unit is also planning pilot programs involving three new highway projects to be completely designed, constructed and maintained in metric.

Other state level activities include:

- The States of Georgia and Maine have formed metric committees to guide metrication for their states; California appears likely to soon establish a California State Metric Conversion Commission;
- In California, the State Division of Oil and Gas has switched to sole use of metric units;
- Massachusetts adopted a bill directing its Legislative Research Council to study the impact of metric conversion on the state;
- Pennsylvania's State Bureau of Standard Weights and Measures is cooperating with Sun Oil Company in a pilot test to determine customer reaction to buying gasoline by the liter. Reaction has been favorable to date.
- Minnesota has passed legislation calling for "gradual but deliberate implementation of the Metric System."
- Other states where metric bills have been introduced include: Hawaii, Maryland, Mississippi, Montana, Nevada, New Jersey, New Mexico, New York, North Dakota, Virginia, and Wisconsin.

The city of Sunrise, Florida, passed a resolution in January proclaiming the metric system as the city's official system of weights and measures.

Federal Government moves

In response to the stepped-up metric activity at the private and state level, the Federal Government's agencies have initiated wide-ranging metric programs.

The key metric activity underway in the Federal Government is the Metric Information Office in the National Bureau of Standards. Originally established on the completion of the U.S. Metric Study in 1971, to disseminate the findings of that study as well as education information about the SI (metric) measurement language, this office serves as reference center for information about metric measurement, preferred metric practice, and the current status of metric usage around the nation.

— The Federal Supply Service in the General Service Administration established a task force to assess the specific impacts of metrication on federal purchase of goods and services.

— The Treasury Department has issued new regulations that will require all wine to be bottled exclusively in metric-sized containers by January 1, 1979;

— The National Aeronautics and Space Administration has presented all measurement values in its reports and publications in metric units since 1970;

— The Environmental Protection Agency recently required that all new standards and regulations written by the agency be expressed in metric measures;

— New Federal Communications Commission rules require the use of meters to specify the distances at which signal measurements will be made;

— The Federal Housing Administration has announced a policy of using metric in publications, reports, and specifications;

— The Forest Service and National Park Service are adding metric to all of their signs dealing with weights and measures;

— The Agriculture Department has begun issuing data on crop yields in metric terms;

— Beginning in April, the Canadian weather forecasts will be entirely in metric; the National Weather Service has determined that it will handle and transmit data received from Canada without converting to customary units.

— The Maritime Administration has developed a program of metric conversion to provide for the orderly transition to metric in all facets of merchant shipping by 1980;

— The National Bureau of Standards is gaining experience in the metrication of machine shop equipment through adapting the machinery in its large instrument shops;

— The Interdepartmental Screw Thread Committee, operated under the auspices of NBS, is deliberating on the metric thread standard to be recommended for Federal Government adoption;

— The patent and Trademark Office of the U.S. Department of Commerce issued a notice to patent applicants in July 1974, requesting use of either sole metric or dual dimensions on applications;

— In addition to its work with the states, HEW's Office of Education has joined with the National Institute of Education to prepare material for teacher training in vocational education and to study foreign metric educational experiences of other converting countries.

Scientific American once said in an editorial: "There exists no good reason at all why the meter-liter-gram system has not been adopted by the people of the United States . . . except that deep-seated quality of human nature which causes us all to put our backs up and resist changes until they are forced on us. . . . Many American manufacturers, however, already are using the metric system of measurements today for the production of export articles. What remains to be done is . . . to convince the average man of the desirability of the change . . . to demonstrate to him that he should contribute his share to making the change."

That editorial appeared 50 years ago.

Everyone is familiar with the adage that "There is nothing so powerful as an idea whose time has come."

How about an idea which is 50 years overdue?

Even Moon Is Metric

Here are some examples of current everyday metric usage:

Pharmaceutical industry (converted in mid-1950's)
Medical profession;
Photography (35mm film);
Tobacco industry (100mm cigarettes);
Olympics and all international sporting competition;
Astronauts on the moon;
All elementary mathematics textbooks include an introduction to metric;
Canned food labels (supplementary metric units);
Ford's Pinto and Mustang II (metric engines);
Metric wrench sets, and
Patterns for home sewing (some dual customary/metric).

Metric Publications

Two semi-monthly magazines devoted solely to metric are now available: *The American Metric Journal*, AMJ Publishing Company, Drawer L, Tarzana, California, 91356, and the *Metric News*, P.O. Box 248, Roscoe, Illinois, 61073.

Three new metric newsletters are being published: one from the newly formed American National Metric Council, one from the National Association of Wholesaler-Distributors, and one from the American Institutes of Research, the *AIR Metri-gram*. In addition, a monthly *Metric System Guide Bulletin*, J. J. Keller & Asso., 145 West Wisconsin Ave., Neenah, Wis. 54956, is available commercially.

Workshop Facilitates Technology Transfer To Developing Countries

The first foreign graduates of the Information Systems Workshops conducted by Commerce's National Technical Information Service are returning to their respective countries to begin applying what they have learned. Representatives of agencies cooperating with NTIS in Colombia, Ecuador, Korea and the Philippines completed the workshop in Washington, D.C., recently.

Since all the agencies have already begun marketing efforts, their representatives were able to report on the different approaches being taken.

Ms. Manolita Leuterio, of the Development Academy of the Philippines, recounted how the Academy is reaching potential customers for NTIS materials: mailings were sent to government agencies and industrial institutions, and ads were placed in local newspapers announcing the availability of the service. The Academy also participated in a catalog show on the environment at the U.S. Embassy in Manila. All NTIS materials sent out have the Academy name stamped on them, to facilitate reordering.

Chung-Jae Cha of KORSTIC—Korea Scientific and Technical Information Center, located in Seoul, told how his agency had placed newspaper ads in both Korean and English to reach its potential audience, and had also advertised in bulletins of Chambers of Commerce, federations and other business groups. KORSTIC also participated in a catalog show on the environment. The Center mailed some 3,000 leaflets to selected recipients, including its regular customers and many at the Agency for Defense Development, a major user of NTIS material. One-third of KORSTIC's customers receiving the mailing requested further information. Future plans include participating with NTIS in a joint exhibit at the 1976 International Federation of Library Associations conference to be held in Seoul.

Urgently needed skills

John J. Carchi of CENDES—Centro de Dessarrollo Industrial, Guayaquil, Ecuador, said that his agency is promoting business administration and management documents heavily, as these skills are more urgently needed in Ecuador than purely technical ones. CENDES publishes a monthly bulletin and includes advertisements for NTIS services in it. The agency plans a follow-up of all its customers, especially those purchasing NTIS documents, to find out what use they are making of the information.

Ms. Balbina Chavarro de Montanes, of COLCIENCIAS—Fondo Colombiano de Investigaciones Cientificas y Proyectos, of Bogota, Colombia, said that COLCIENCIAS has sent letters and sample publications to universities and other institutions announcing NTIS services, and she has begun personally contacting libraries. In the planning stages are setting up a reference section and instituting a deposit account system like that used by NTIS. COLCIENCIAS also plans to expand NTIS promotion to its cooperating offices in other cities in the near future.

During the three-week training program the representatives were thoroughly briefed on all phases of NTIS operations, from the processing of incoming documents to marketing methods. They learned of NTIS plans for their countries and were given the opportunity to discuss any problems they had encountered.

They visited other information sources, such as the Library of Congress, the National Library of Medicine, the Educational Resources Information Center and the Smithsonian Science Information Exchange, to study their operations.

In developing countries, technical institutes, industrial associations, universities and similar organizations often perform information dissemination services for specialized groups of users early in the development process. However, a national technical center eventually becomes a necessity to the overall technical information needs of a country. Such a center may end up coordinating all information activities within a country into an efficient national program.

An example of the way in which technical information can aid in a country's development was given by an official of Ecuador's CENDES. He identifies the slow development of small Ecuadorian industry as due principally to the lack of a general policy of coordination and development. He cited, specifically, lack of an appropriate economy, deficient management practices, lack of market knowledge, low productivity and deficient technologies, all of which he felt could be improved through transfer of technology.

He sees his company becoming a catalyst in the development of small industry in the country. The transfer of technical assistance information to other state institutions makes coordination possible.

About two years ago, NTIS and the U.S. Agency for International Development began an experimental program designed to make it easier for developing countries to more fully utilize this information. All of NTIS' information services are available at cost to countries which can use newly developed technical information to speed up their industrial progress.

Provides for training

It was under this program that NTIS engaged organizations to distribute its publications in developing countries. Part of the agreement provides that representatives of these agents come to Washington for training.

The three objectives of the USAID/NTIS cooperative effort are:

- to facilitate utilization of U.S. technical and scientific information in developing countries,
- to establish links between NTIS and the scientific and technical information services in developing countries, and
- to strengthen, through these links, the capabilities of those information services.

Most technical reports that result from U.S. government-sponsored research are available for purchase from NTIS—its collection of documents now numbers some 800,000. NTIS is the primary source for scientific and technological information developed by federal agencies, their contractors and grantees. Almost from its birth, the United States has been willing to share with other nations the scientific and technological information it has developed. One reason for this, of course, is that as the developing countries improve their technology, they may look to U.S.-built equipment to meet their needs.

Area Report On '74 Trade Shows Many Gains, Offset By Oil Deficit

A report on U.S. world trade by commodities in 1974 was published in the Feb. 17 issue. This article analyzes the 1974 trade figures by area.

The adverse shift in the U.S. trade balance last year to a deficit from a small surplus in 1973 primarily reflected the soaring costs of imported petroleum from developing nations. In most areas, the trade position was stronger with the result that the overall deficit was held to $3.1 billion compared to the previous year's surplus of $1.3 billion.

Spurred by heavy demand for food, capital epuipment, and other manufactures, U.S. exports to the oil-exporting countries rose considerably. But because of the more than 200 percent increase in the value of imports from those nations, the deficit with them rose from $1.8 billion in 1973 to $12.3 billion last year.

That huge imbalance was in marked contrast to the $5.6 billion merchandise trade surplus with the rest of the developing world. Receipts from those nations advanced by more than a third, but exports jumped by 50 percent.

Imports from the developed countries as a group grew only moderately faster than in 1973. While demand for capital and consumer goods slowed with the severe domestic recession that saw U.S. economic activity fall in each quarter, inflationary pressures intensified. Arrivals from Western Europe increased at about the same rate as in 1973, as purchases from West Germany and the United Kingdom in particular were less buoyant. Imports from Japan and Canada, on the other hand, posted substantially faster rates of increase than in the preceding year.

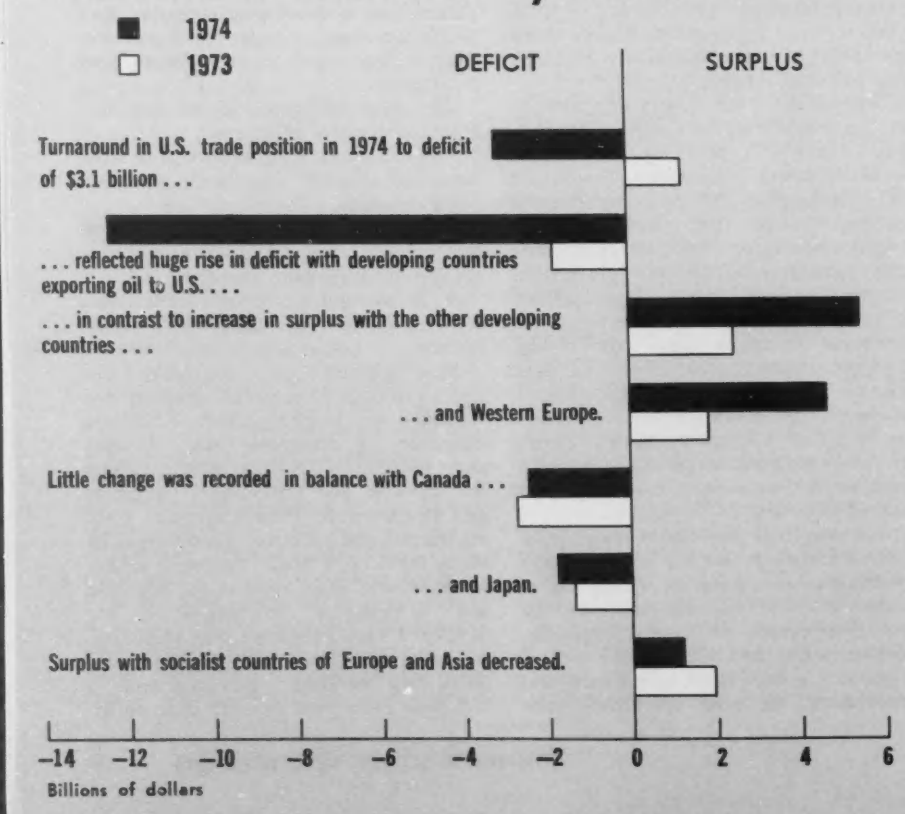
Reflecting a decline in economic activity throughout the industrialized world, exports to these countries grew more slowly in value than in 1973. Much of the rise that did occur was accounted for by higher prices for U.S. goods. Shipments to Japan in particular grew by less than half the 1973 rate, while the growth in sales to Western Europe was reduced, but less dramatically.

The differing pattern of growth for exports and imports with Western Europe resulted in a nearly $3 billion expansion in the surplus with that area. Relatively little change was recorded, however, in the deficits with our two leading trading partners. The negative balance with Canada fell slightly to $2.4 billion, but it increased to $1.8 billion with Japan.

The surplus recorded in 1974 with the socialist countries of Europe and Asia dropped to $1.2 billion as exports declined and imports rose substantially.

The sections which follow provide a summary of significant shifts in U.S. trade with each major group of countries.

U.S. Trade Balance, By World Areas


1974
1973
DEFICIT
SURPLUS
Turnaround in U.S. trade position in 1974 to deficit of $3.1 billion . . .
. . . reflected huge rise in deficit with developing countries exporting oil to U.S. . . .
. . . in contrast to increase in surplus with the other developing countries . . .
. . . and Western Europe.
Little change was recorded in balance with Canada . . .
. . . and Japan.
Surplus with socialist countries of Europe and Asia decreased.
−14 −12 −10 −8 −6 −4 −2 0 2 4 6
Billions of dollars

Trade with oil exporters soars

U.S. trade with the Organization of Petroleum Exporting Countries (OPEC) and the other oil exporters among the less developed countries (LDCs) expanded rapidly in 1974. Imports from these nations were swelled by the huge increase in petroleum prices, but exports also rose

substantially as the larger foreign exchange earnings and new industrialization and development programs spurred demand for U.S. goods.

Imports more than trebled to reach a total of $20.4 billion. Although most of the increase resulted from skyrocketing petroleum prices, the volume of crude oil advanced by 19 percent, despite the Arab embargo which curtailed arrivals in this country until April.

Exports to these countries soared to $8.1 billion, an 80 percent increase over 1973. Machinery shipments (especially construction machinery, cooling equipment, and pumps) expanded sharply. In addition, sales of civilian aircraft, automotive products, chemicals, and steel recorded large gains. Deliveries of military goods nearly doubled in value, reaching $500 million. Agricultural exports, notably wheat and fats and oils, were also considerably higher, in large part due to higher prices, though the volume was up as well.

Demand for U.S. goods from other developing countries was substantially above 1973 as a result of their expanded earnings both from higher prices for agricultural and raw materials exports and from greater deliveries of manufactured products. Increases in shipments were especially large to Mexico, Brazil, Singapore, Korea, and Taiwan—countries which experienced relatively rapid growth in 1974. Sales of chemicals and steel soared as did machinery and aircraft. Boosted by price advances, U.S. exports of grains were also up sharply.

The value of goods imported from the non-oil developing countries grew by 36 percent. Sugar, at sharply higher prices and in larger quantities, accounted for most of the increase in food purchases. Coffee imports, in contrast, declined by 4 percent in value, while quantities dropped even more sharply because of high U.S. inventory levels. Imports of copper, crude rubber, and electronic components recorded large advances. Among consumer goods, purchases of clothing, footwear, and electronic products expanded significantly.

U.S. Trade With Oil-Exporting Developing Countries, 1973-74

	1973	1974	Percent change from 1973 to 1974
	Million dollars		
Exports, total	4,513	8,121	80
Construction and mining machinery	235	380	62
Pumps and centrifuges	135	225	67
Heating and cooling equipment	113	200	77
Power machinery and switchgear	109	194	78
Electrical apparatus, other	180	294	63
Other machinery	615	821	33
Road motor vehicles and parts	323	550	70
Civilian aircraft and parts	234	375	60
Chemicals	300	583	94
Iron and steel-mill products	159	481	203
Other manufactured goods	580	910	57
Crude materials	137	280	104
Oils and fats	121	352	191
Wheat	397	892	125
Rice	89	223	151
Other foods and tobacco	358	585	63
Military goods	267	516	93
Other commodities and reexports	161	260	61
Imports, total	6,301	20,445	224
Petroleum, crude	2,843	12,012	323
Million barrels	*878*	*1,048*	*19*
Petroleum products	2,341	6,788	190
Foods	431	645	50
Rubber, crude	134	224	67
Iron ore and concentrates	128	193	51
Other commodities	424	583	38

Faster rise in sales to Canada

Exports to Canada, the largest foreign market for U.S. goods, rose considerably more rapidly last year than in 1973. In spite of an economic slowdown there, demand for many products remained buoyant and shipments advanced in value each quarter through the year. Continued high levels of investment spending spurred demand for machinery. Deliveries of construction equipment and farm machinery posted particularly large gains. Exports of computers and parts and other business machines also climbed substantially. Moreover, motor vehicle exports grew further, as both car and truck sales in Canada continued relatively strong. Probably all of the slight increase in the value of auto parts shipped north—many of which return to this country in the form of assembled vehicles—was due to price increases. Large advances were recorded in sales of industrial materials, particularly chemicals, steel, and textiles, mainly due to higher prices.

Imports from Canada also rose faster in value than in the preceding year, although lagging behind export growth. Spurred by entries of industrial supplies at sharply increased prices, imports advanced by 26 percent. Crude petroleum imports declined in quantity, but advanced by $1.8 billion because of price increases and the imposition of a Canadian tax up to $6.40 per barrel, designed to raise the export price to world market levels. Petroleum products and natural gas likewise rose substantially in value. Woodpulp and newsprint imports posted sharp advances, although the volume remained about the same as in 1973. As the U.S. construction industry continued sluggish, lumber entries declined by one-third in value.

The growth in the value of automotive imports from Canada slowed to only 5 percent compared to 12 percent in 1973. The slump in vehicle production in this country reduced the inflow of parts and accessories. Passenger car arrivals fell by 6 percent in quantity, though their value was boosted by higher prices which rose especially rapidly in the second half of the year. The volume of entries in that period was retarded by the slump in U.S. car sales. Receipts of commercial

Trade in 1974

	U.S. Exports	U.S. Imports[1]
	$ million	
Petroleum-exporting LDCs	8,120	20,445
Other developing countries	24,578	19,026
Canada	19,932	22,282
Western Europe	28,638	23,745
Japan	10,679	12,455
Austrialia-New Zealand	2,609	1,389
Socialist countries in Europe and Asia	2,239	1,007

[1] Customs values

vehicles from Canada displayed a similar pattern last year, rising in value but dropping in quantity.

Sales in European markets rise

Exports to Western Europe climbed by one-third over the previous year's level. Sharply higher sales to West Germany, the Netherlands, and the United Kingdom accounted for about half the expansion. The value of exports grew only moderately less than in 1973, despite the widespread slowdown in economic activity in that area, as higher prices offset volume changes. Machinery shipments remained strong, reflecting expanded investment expenditures in certain sectors and the relatively long leadtime between placing of orders and delivery. These shipments advanced by one-third, led by computers and electronic components. Sales of oil-drilling equipment also climbed, especially to the United Kingdom and Norway, the countries involved in the development of North Sea oilfields.

Among industrial supplies, chemical exports expanded by two-fifths, while coal deliveries more than doubled in value, reflecting soaring prices and a 12 percent increase in volume. Civilian aircraft exports rose at a much slower rate than in 1973. The $1.5 billion gain in agricultural sales largely reflected higher export prices for corn and soybeans, though the latter commodity also climbed by more than one-tenth in quantity.

Imports from Western Europe expanded in value by one-fourth, about the same rate as in 1973. Purchases of more expensive industrial supplies accounted for most of the increase. Arrivals of steel, fuel oil, and chemicals climbed substantially in value. More than half of the increase in consumer goods imports consisted of greater purchases of passenger cars and parts. The volume of new car arrivals advanced strongly in the first half, contrasting to the falloff in 1973. They declined precipitously, however, in July-December in both value and quantity because of swollen inventories and lower U.S. sales. Receipts of electric appliances, clothing, and footwear all declined in value, probably as a result of consumer resistance to higher prices.

Trade with Japan up again

After increasing by two-thirds in 1973, exports to Japan climbed much more modestly last year. The slower growth was attributable mainly to weaker Japanese demand as the country's real gross national product fell for the first time since World War II and industrial production nose-dived. Sales climbed sharply in value in the first half, but only marginally in the final six months as the effects of the recession on demand for U.S. products became more pronounced.

Export gains were highly concentrated; half of the rise in nonfarm shipments reflected a huge jump in the quantity and value of coal exports. Deliveries of jumbo jets and other aircraft also climbed substantially in value, but machinery advanced less vigorously. Price increases boosted the value of agricultural sales, particularly wheat, corn, and cotton, with only the last recording a volume gain.

In contrast to exports, imports of goods from Japan increased far more rapidly than in 1973. Steel imports remained on a steep uptrend throughout the year both in value, which was up more than $1 billion, and in quantity. Receipts of cars, motorcycles, and trucks soared in value and volume, but consumer electronics purchases fell.

Exports to Australia and New Zealand rose steeply for the second consecutive year, climbing by more than one-half to $2.6 billion. Although economic activity in both countries weakened considerably after mid-year, demand for U.S. products, particularly capital goods, remained relatively strong. Sales of machinery posted a huge advance, led by power-generating machinery, computers, and construction equipment. Exports of civilian aircraft doubled, as additional wide-bodied jetliners were delivered. Moreover, shipments of chemicals and textiles increased vigorously. Sales of military goods, on the other hand, dropped to only $4 million from their exceptionally high level of $177 million in 1973.

The 6 percent decline in imports from Australia and New Zealand reflected an unusual reduction in meat arrivals. Constituting over half the value of our imports last year, meat purchases fell by about $250 million as a result of greater U.S. domestic supplies and weaker prices.

Decline in sales to USSR

Shipments to the socialist countries in Europe and Asia declined by 10 percent in a turnaround from 1973 when they more than doubled. The nearly $600 million drop in sales to the USSR more than offset increased exports to most East European countries and to the People's Republic of China (PRC). Greater deliveries of machinery and aircraft comprised a large part of the export gain to Eastern Europe, while the rise in shipments to the PRC was centered mainly in farm products and aircraft.

Imports from the socialist countries continued to rise vigorously in contrast to exports. Purchases of various industrial supplies accounted for a large portion of the increase, with entries of petroleum, steel, platinum, and nickel especially strong. In addition, arrivals of gold coins from Hungary soared by more than $50 million.

Eximbank To Buttress Export Aid

New initiatives will strengthen Eximbank's support of U.S. exports. The bank will increase the range within which it will extend direct credit from 30 to 55 percent of the export price instead of the presently prevailing range of 30 to 45 percent. The remainder of the financing may or may not be guaranteed by the bank. When there is no direct credit, the bank may guarantee as much as 85 percent of an export transaction.

The range within which the Eximbank interest rate on direct credits will be fixed also has been changed to between 7 and 9 percent instead of 7 to 8½ percent. The bank intends to make more active use of its guarantee and when it does, a commitment fee of ⅛ percent will be charged. The bank's guarantee fee will continue to be fixed within a range of ¾ prcent to 1½ percent. Financing packages will be structured so that the blended interest rate of combined Eximbank and private financing does not fall below 7½ percent in accordance with understandings between industrial nations.

The Eximbank is also setting up two new advisory services. One will advise small businesses involved in exporting on how to use Eximbank credits, insurance, guarantees, discounts and foreign bank credits supported by Eximbank.

The other will assist large firms and banks involved in larger projects to work with supplemental sources of financing, such as the new financing institutions created by OPEC countries, official export credit agencies of other countries, and institutional investors in the U.S. The staff will keep in touch with these sources of financing and develop ways and means for the meshing of Eximbank financing with financing available from these sources.

Currently, other countries offer official credit for as much as 80 percent to 90 percent of the export price while Eximbank direct credits have been limited to 45 percent. The new policies will again permit Eximbank to provide support up to 90 percent through a flexible combination of direct credits and guarantees. In recent months, direct credits have been held to 30 percent in most cases, with the combination of credits and guarantees being held to 60 percent in most cases and only occasionally extended to 70 percent.

Energy Management Digest

LIGNITE STUDY...Secretary of Commerce Frederick B. Dent has approved a $50,402 grant to help plan the development of lignite as an energy source to stimulate long-range economic growth in a 10-county area of southwest Alabama. Extensive deposits of lignite--also known as brown coal and wood coal--are reported in parts of Choctaw, Marengo, Sumter and Wilcox counties. Local officials anticipate that the availability of lignite as a source of energy will stimulate industrial growth in the region by attracting plants requiring low-cost power. The EDA funds will be used to help pay costs of a 12-month study to locate and ascertain the extent of lignite in the region and consider the potential impact of lignite-based industries on the region.

LASER ENERGY...KMS Fusion of Ann Arbor, Mich., under contract to the Energy Research and Development Admin., will use its laser and target irradiation facilities to develop data on the behavior of different target pellet designs when irradiated by various laser pulses. The development of laser-fusion as an energy source is based on the concept of using extremely high-powered, short pulses of laser energy to implode and compress pellets of thermonuclear fuel to densities approximately 1,000 times greater than those of normal solids and thus heat the pellets to 'ignition.' Energy is released in the form of X-rays and high velocity nuclear particles which can be converted to heat by absorption in a surrounding chamber. The heat can then generate steam for conversion to electricity or be used directly for chemical processing.

$5,000 PER DAY...More than 10,000 operators of the nation's oil and gas fields have been reminded of their obligation under law to provide data on their activities for a Federal Energy Administration study mandated by Congress. The operators were sent notices of noncompliance because they failed to respond to the first part of a two-part FEA questionnaire mailed to them in December. Part I of the questionnaire was due within 10 days of receipt. Part II was due on or before March 1. The questionnaires were sent to 22,000 operators to provide FEA with data on the amount of oil and gas originally in place in discovered fields, the volume of proved reserves remaining, production rates over the last five years, and current production capacity. Under the Energy Administration Act of 1974, failure to provide FEA with data requested could result in administrative or judicial compliance proceedings with possible imposition of civil and/or criminal penalties of up to $5,000 for each day of noncompliance.

CITY FATHERS ELECT SOLAR...The city of Santa Clara, in California, has contracted to build what is said to be the first municipally-owned structure in the country to be both heated and cooled by solar energy. The energy collecting system will be made up of a 6,500-square foot array of flat glass plates linked to water chillers, fan coil units with both hot and cold coils, and storage for both hot and cold water. Automatically controlled pumps and separate room controls will allow the supply of both hot and cold air to various parts of the building at the same time. The system is expected to furnish about 65 percent of summer energy needs and 84 percent of annual heating and hot water needs, at a saving of 75 to 80 percent of conventional system costs.

COAL GASIFICATION...Sandia Laboratories of Albuquerque has been assigned a $676,000 ERDA contract to monitor underground coal gasification experiments at Hanna, Wyoming. The project involves injection of air thru wellbores into a coal seam to sustain partial combustion of coal. The process produces a low-BTU gas which may be suitable for power generation or as a substitute for natural gas in certain industrial processes. If this process proves viable, energy could be produced from coal deposits that are inaccessible by conventional mining techniques.

ENERGY-SAVING GLASS...How high-performance glass can help reduce fuel bills for homes and commercial buildings is described in a new booklet. It describes the performance and other characteristics of insulating, reflective, and reflective-insulating glass units for windows and doors in new and existing buildings. The 8-page publication also discusses such design considerations as life-cycle costing, energy-cost analysis and building energy budgets. Energy-Effective Windows for Cost Savings and Conservation, is available from PPG Industries, 10 North, One Gateway Center, Pittsburgh, Pa. 15222.

Competitor Maritime Powers Give $2 Billion In Subsidies To Their Shipping Industries

Seven leading maritime nations extend direct and indirect subsidies totaling more than $2 billion per year to their shipping and shipbuilding industries, according to a recently completed study commissioned by Commerce's Maritime Administration.

The study, entitled "Foreign Maritime Aids," examined the financial assistance provided by Japan, Spain, Sweden, West Germany, Norway, France and the United Kingdom.

According to the findings, the United Kingdom's assistance to its maritime industries aggregated $550 million in 1972. In addition, the U.K. provided exemptions of $37 million in value-added taxes on ships built for domestic owners.

The Japanese government's support of its maritime industries is estimated, on a current account basis, at $500 million for the fiscal year ending in March 1973. On capital account, the government supplied an additional $278 million for the acquisition of ships for domestic owners, according to the study.

Other countries

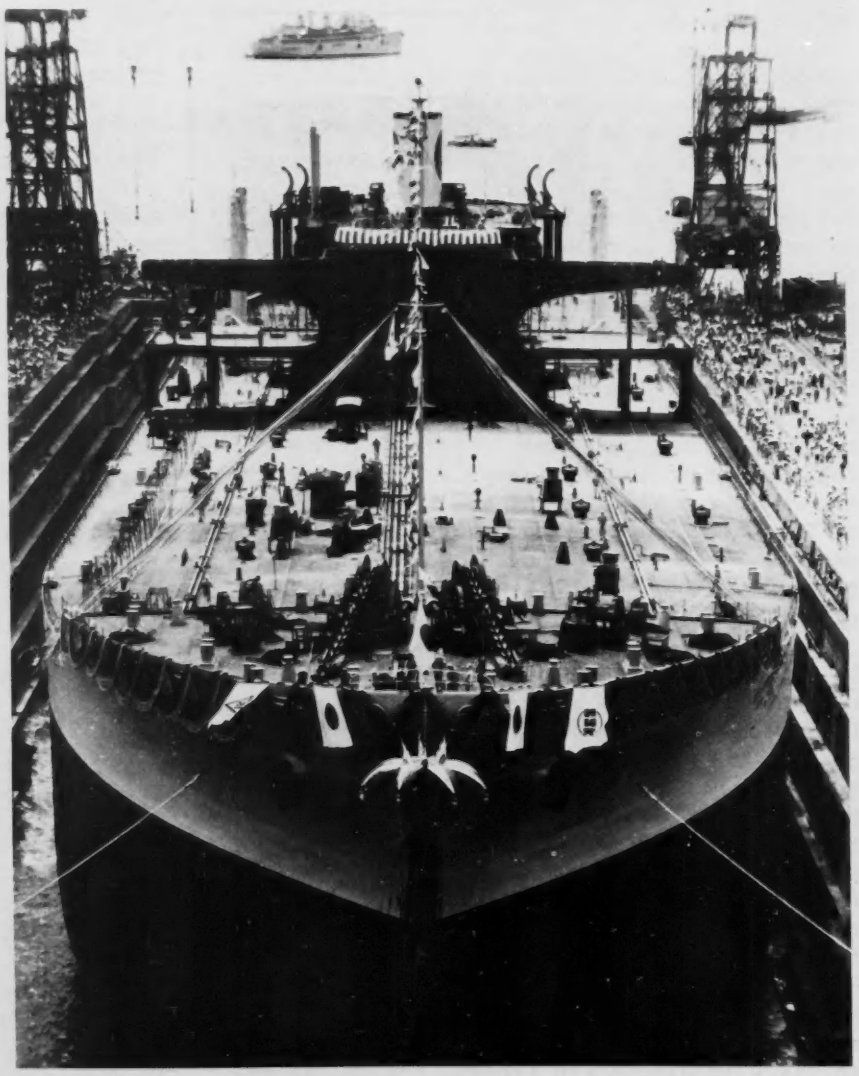
The annual levels of maritime assistance provided by the other five countries examined were:

Spain, $200 million; Sweden, $85 million plus $22 million in exempted value-added taxes for ships built for domestic owners; West Germany, about $100 million plus an additional $50 million in value-added tax exemptions; Norway, more than $200 million, plus $18 million in preferential tax exemptions; and France, $400-$500 million per year.

The study's findings reflect interviews with 300 individuals in about 90 organizations, including senior executives of ship operating and shipbuilding firms, financial institutions, maritime associations and officials of the United Nations' Conference on Trade and Development and the Organization for Economic Cooperation and Development.

The study evaluated all forms of direct and indirect government assistance including construction subsidies, interest subsidies, depreciation allowances, deferred capital gains taxes, loan guarantees and tax write-offs of devaluation losses.

The report is available for $8.75 from the National Technical Information Service, 5285 Port Royal Road, Springfield, Va. 22161. Order number COM-75-10093.



OFFICIAL HELP—*The Japanese Government provides an estimated $500 million per year in subsidies to its maritime industry, to aid projects such as construction of the supertanker at right. France and the United Kingdom provide about the same level of assistance, according to a recently released Maritime Administration report, and four other countries studied actively support their shipping interests.*

Pollution Control Expenditure At About 1.6 Percent Of GNP

A new statistical series developed by Commerce's Bureau of Economic Analysis shows that outlays for pollution abatement and control by business, government, and consumers in 1972 totaled $18.7 billion, or 1.6 percent of the gross national product.

Figures for subsequent years are in preparation.

"This estimate is the result of more than two years of major pioneering research," says George Jaszi, Director of BEA. The 1972 estimate, the first of the new series, is published in the February issue of the *Survey of Current Business* in an article entitled "National Expenditures for Pollution Abatement and Control, 1972" by John E. Cremeans and Frank W. Segel.

The estimate covers all spending for domestic air, water, solid waste, pesticides, noise, and radiation pollution abatement and control.

Cremeans says that, while the estimate for 1973 probably will be ready in six months, at this time he has insufficient information to guess at what it will show. The 1974 estimate, he adds, should be issued by June, 1976, and thereafter each yearly estimate about 18 months after the end of the year.

For 1972, nearly $8.6 billion, or 45 percent of total anti-pollution spending, aimed at reducing water pollution. Spending for other major purposes follows: air, $6.5 billion, or 35 percent of the total; solid waste, $2.7 billion, or 15 percent of the total; and other purposes, $900 million, or roughly 5 percent of the total.

Chief target: emissions

About 90 percent of the 1972 spending was for goods and services to reduce the emission of pollutants. Of the remainder, about 8 percent was spent by public and private agencies for pollution abatement research and development, and 2 percent for regulation and monitoring.

Gross outlays for pollution abatement and control in 1972 totaled $19.3 billion, and costs recovered as a part of the abatement process amounted to $550 million.

Cremeans and Segel explain that all charges for controlling the emission of pollutants are covered, but other aspects of environmental protection, such as the conservation of natural resources or the protection of endangered species, are not included.

A breakdown of spending by different sectors of the economy follows: businesses, $10.3 billion, including $1.2 billion by government enterprises; federal, state, and local governments, $6.5 billion; and consumers $1.9 billion.

The BEA report distinguishes between pollution abatement and control. Abatement is direct action to reduce emission of pollutants. Control includes two activities that reduce pollution indirectly: regulation and monitoring, and research and development.

Spending to reduce emission of pollutants totaled $16.8 billion in 1972. Of this, $5 billion was on equipment and the like, and $4 billion on operating expenses. Federal, state, and local governments spent $5.9 billion for pollution abatement. Water pollution abatement, mostly capital outlays for sewers and sewage treatment facilities, accounted for about 70 percent of the money spent by governments.

Governments spent $400 million for

State Water Quality Outlays

(Dollar amounts in thousands)

State	Fiscal 1972 Total	Current oper.	Capital outlay	Inter-gov't	Fiscal 1973 Total	Current oper.	Capital outlay	Inter-gov't	Employment Oct. 1973
Total	537,868	60,392	39,924	437,552	608,138	74,331	45,738	488,069	5,427
Ala.	957	402	500	55	946	392	500	54	41
Alas. ..	6,394	364	14	6,016	3,464	281	11	3,172	10
Ariz. ..	234	211	23	—	300	283	17	—	33
Ark. ..	195	144	51	—	2,009	533	55	1,421	59
Calif. ..	27,040	7,458	38	19,544	29,993	7,611	61	22,321	523
Colo. ..	500	500	—	—	1,035	455	580	—	32
Conn. ..	51,548	444	—	51,104	35,637	610	8	35,019	48
Del.	4,834	278	29	4,527	2,578	393	29	2,156	18
Fla.	1,502	1,371	131	—	9,965	3,172	131	6,662	219
Ga.	921	856	53	12	1,208	1,060	37	111	68
Ha.	1,437	271	992	174	1,298	296	828	174	25
Idaho ..	475	440	33	2	2,260	596	48	1,616	18
Ill.	22,784	1,958	811	20,015	31,845	2,771	476	28,598	174
Ind. ..	7,929	794	—	7,135	6,990	889	—	6,101	52
Iowa ..	4,542	313	—	4,229	6,143	500	—	5,643	38
Kan. ..	758	749	9	—	987	882	105	—	59
Ky.	354	297	57	—	549	404	145	—	65
La.	765	729	36	—	970	893	77	—	48
Me.	7,425	507	45	6,873	12,309	675	33	11,601	41
Md.	15,550	1,768	15	13,767	14,918	2,506	24	12,388	122
Mass. ..	23,047	8,104	3,550	11,393	25,090	7,912	6,182	10,996	509
Mich. ..	102,515	1,459	45	101,011	78,589	2,503	174	75,912	164
Minn. ..	969	894	75	—	7,131	1,438	47	5,646	106
Miss. ..	4,319	278	37	4,004	4,492	334	157	4,001	38
Mo.	2,835	521	—	2,314	5,445	722	6	4,717	53
Mont. ..	277	237	12	28	839	365	24	450	25
Neb. ..	1,099	263	29	807	4,025	414	44	3,567	40
Nev. ..	102	102	—	—	134	134	—	—	6
N.H. ..	2,983	925	22	2,036	3,683	1,348	153	2,182	88
N.J.	17,430	1,375	—	16,055	16,590	1,744	89	14,757	115
N.M. ..	231	213	18	—	340	310	30	—	33
N.Y. ..	79,759	3,908	24,824	51,027	115,809	3,680	22,606	89,523	328
N.C. ..	1,561	1,498	63	—	1,941	1,866	75	—	161
N.D. ..	94	92	2	—	113	92	3	18	8
Ohio ..	66,227	2,347	1,422	62,458	82,099	2,905	5,831	73,363	282
Okla. ..	1,257	1,120	17	120	1,499	1,233	101	165	86
Ore.	2,648	791	61	1,796	12,857	1,143	105	11,609	66
Pa.	25,734	4,606	36	21,092	30,160	6,286	187	23,687	432
R.I.	8,451	856	6,254	1,341	6,799	979	5,284	536	71
S.C.	638	560	78	—	811	728	83	—	155
S.D.	113	111	2	—	195	112	25	58	17
Tenn. ..	3,697	770	82	2,845	1,562	966	476	120	83
Tex. ..	4,294	4,060	144	90	4,542	4,300	161	81	324
Utah ..	272	268	4	—	376	366	10	—	21
Vt.	2,729	690	—	2,039	3,922	791	26	3,105	80
Va.	3,709	1,830	85	1,794	7,720	2,534	242	4,944	232
Wash. ..	3,461	989	124	2,348	7,752	1,804	272	5,676	93
W.Va...	616	556	60	—	808	719	89	—	48
Wis. ..	20,544	1,008	35	19,501	17,246	1,238	89	15,919	57
Wyo. ..	113	107	6	—	165	163	2	—	13

regulation and monitoring, an exclusive governmental activity. Research and development outlays totaled $1.6 billion. Private research and development, including development of equipment and products for pollution abatement, amounted to $1.3 billion. Governments spent $300 million for abatement techniques.

Federal Government funding for pollution abatement and control totaled $1.7 billion. Of this amount, $900 million was spent directly by federal agencies, and $800 million in grants to state and local governments.

The BEA explains that the $1.9 billion credited to consumers for pollution abatement was for purchasing and maintaining pollution controls on cars Although consumers engage in other pollution abatement activities, such as the purchase of returnable containers, these do not lead to significantly increased net expenditures. Other personal anti-pollution outlays, such as those that lead to reducing emissions from residential property, are classed as business expenditures because home ownership is regarded as a business in the national economic accounts.

Five problem areas

The survey article explains the problems and the methods used in crediting business outlays for pollution abatement. The following five definitional problems are discussed: the baseline problem, which involves defining what constitutes a genuine pollution control expense; joint costs that arise because many abatement techniques also increase production or have valuable by-products; the classification of capital goods acquired to produce goods and services sold to others to reduce pollution; some expenditures made as a result of pollution abatement are not recognized as such by those who make them; and the separation of pollution abatement and control expenditures from those incurred for industrial safety and other related purposes.

In discussing the baseline problem, Cremeans and Segel make this comment:

"In practice, many recently developed processes are both cleaner and less costly. For example, a major segment of the paper industry has shifted from the sulfite to the sulfate process because it is more efficient. The fact that the sulfate process is also less polluting is a benefit, but its cost should not be charged to pollution abatement."

Meanwhile, Commerce's Bureau of the Census in a separate report says that outlays by different U.S. Government bodies to help clean up the nation's environment rose by 9 percent in fiscal 1972-73 to a $6 billion total.

The report says that water quality improvement accounted for $4 billion of the total, solid waste management $1.8 billion, and air quality $220 million.

Industrial Boilers, Big Energy Users, Eyed in FEA Study

Industrial boilers, which currently use more than 20 percent of the nation's energy budget, may be in for a streamlining.

The Federal Energy Administration has awarded a $124,000 contract to KVB Engineering of Tustin, Cal., to define the available energy-saving equipment and techniques applicable to industrial boilers.

An estimated 50 percent of all energy consumed by industry goes to generate process steam. Almost all of that steam is generated in industrial direct-fired boilers, which use 15 quadrillion Btu's per year.

There are an estimated 63,500 such boilers in the United States with an output of greater than 10,000 pounds per hour steam flow, and their fuel use is significant in national energy planning and conservation.

KVB Engineering is an independent consulting organization working in the field of combustion technology, especially those aspects related to steam boilers and emission controls.

The ten-month study will address three questions:

- What is the potential for energy conservation with respect to industrial boilers?
- To what extent can available equipment and techniques improve industrial boiler efficiency?
- What would be the impact of the fuel savings for different types of boilers on national fuel consumption?

The final report will determine the design and actual and theoretical maximum efficiencies for major types of industrial boilers, and the potential for improved efficiency and energy conservation through using available auxiliary equipment and techniques.

The contractor will also provide a buyer's and user's manual that will describe efficiency, fuel consumption and cost tradeoffs for various combustion control and equipment modifications. The manual will establish the environmental impact of those recommendations, as well as recommend specific research and development programs needed to achieve higher efficiencies.

Minority Owners Increase In Service Industries

Black and other minority entrepreneurs have been finding it easier to break into fast food and other service businesses in recent years, according to Commerce's Office of Minority Business Enterprises. One reason is that OMBE negotiations with fast food chains have obtained lower down payment requirements for minority businessmen, to enable them to enter that field.

In 1969, minorities owned less than 500 franchises, according to OMBE Director Alex Armendaris. Today that figure has grown to nearly 2,500.

Blacks have also made good headway in other such businesses as hotels, motels, laundries, beauty and barber shops, business services and auto repair. They owned just over 56,000 such firms in 1969, and nearly 68,500 in 1972, the most recent year for which figures are available.

Energy Unit Conversion Chart

Cubic feet natural gas * (CF)	Barrels oil (Bbl)	Short tons bituminous coal (T)	British thermal units (Btu)	Kilowatt hours Electricity (KWHR)
—	—	—	1	0.000293
1	0.00018	0.00004	1000	0.293
3.41	0.00061	0.00014	3413	1
1000 (1mcf)	0.18	0.04	1 million	293
3413	0.61	0.14	3.41 million	1000 (1 MWhr)
5600	1	0.22	5.6 million	1640
25,000	4.46	1	25 million	7325
1 million (1 mmcf)	180	40	1 billion	293,000
3.41 million	610	140	3.41 billion	1 million (1 GWhr)
1 billion (1 bcf)	180,000	40,000	1 trillion	293 million
1 trillion (1 tcf)	180 million	40 million	1 quadrillion**	293 billion

*Based on the following nominal fuel heating values: 1 Cubic Foot Natural Gas=1000 Btu; 1 Barrel Crude Oil=5.6 Million Btu; 1 Pound Bituminous Coal=12,500 Btu. Substitute Natural (SNG) and Liquefied Natural Gas (LNG) will have about the same heating value.
**One quadrillion Btu=One "quad."
Source: Institute of Gas Technology, Chicago

Industry Highlights

Consumer Electronics Firms Concentrate On Raising Sales

(Industry Highlights is prepared by the Office of Business Research and Analysis, Bureau of Domestic Commerce.)

Factory sales in the consumer electronics industry fell sharply at the end of 1974. Layoffs were extensive and inventories were up in the big-ticket industry leader, color TV, which accounts for 55 percent of the value of domestically-produced consumer electronic products.

Monochrome and color TV together constitute 63 percent of the industry's sales, and their combined end-of-year sales were almost one-third below the 1973 level.

For the full 1974 year, the overall drop in factory sales was approximately 15 percent, to $3.3 billion. The level of import penetration stayed at the 39 percent level that it reached in 1973. Expectations are that the industry's 1975 factory shipments may be down in units but about the same in dollars, reflecting price increases on required materials. The total television market, including both domestic production and imports, is projected at 7.3 to 7.8 million color units and 5.5 to 5.8 million monochrome sets.

These estimates are somewhat clouded by the January sales performance of TV, down about 25 percent from the same month last year.

Nevertheless, TV set makers who attended the Chicago consumer electronics show in January generally corroborated these estimates. One was quoted in the January 23 issue of Electronics as saying "all manufacturers are affilicted by a lack of profitability . . . the net result will be an all-out effort to improve technology, but only that which will yield lower costs and higher reliability." Another TV manufacturer added, "major innovations and product moves are not in sight this year. We just can't afford radical changes and new technologies in a year where the goal has got to be sales volume."

Import market share

Consumer electronics imports from foreign producers as well as overseas facilities of U.S. companies account for nearly 40 percent of the total value of sales of this equipment in the U.S. market, including: 10 percent of color TV sets; 15 percent of auto radios; more than 50 percent of monochrome TV sets; and nearly 100 percent of home radios and tape recorders.

Shipments of auto radios, which are an important product of the consumer electronics industry, are significantly influenced by levels of U.S. auto production. With sales of U.S. cars off sharply in 1974, radio sales dipped too.

Increasing import penetration, strong competition from other U.S. producers, and declining profits margins have caused several U.S. consumer electronics firms to drop unprofitable or marginal product lines. High capital costs have been a contributing factor in this decision, especially among the larger multiproduct electronic firms with other more profitable product areas.

One of the largest and oldest consumer electronics manufacturing firms has announced that it will phase out its entire line of home audio products by 1975. Products being dropped include radios, audio tape players and recorders, phonographs, and stereo systems. During recent years, sales of these products have not ben profitable and have declined to only 5 percent of the company's consumer electronics business. Approximately 600 employees will be affected by this decision.

Foreign purchasers

Two major consumer electronics manufacturers have recently sold domestic operations to foreign-owned firms with U.S. subsidiaries. One, in particular, has sold its entire domestic television operation to a Japanese firm, which intends to modernize its production facilities and hopes to restore profitability within three years. This acquisition, which was opposed by other important U.S. consumer electronic equipment manufacturers, reportedly would give the Japanese company more than 10 percent of the U.S. TV market.

Looking toward 1980, U.S. consumer electronics manufacturers foresee a number of important developments taking place in the next few years which will require significant management decisions. Among the more immediate and significant trends is a build-up in the Japanese-controlled export base for consumer electronic products in Korea.

Acquisition by the Japanese of production facilities in the United States indicates that they feel the U.S. market is profitable and that they need a source of supply within the market. Import unit prices will continue to rise, which will improve the competitive position of U.S. manufacturers, as well as Japanese companies manufacturing in this country.

Total shipments by manufacturers classified as falling within the consumer electronics industry are expected to grow at an average annual rate of 2.6 percent during the 1974-80 period, reaching $5.2 billion in 1980. Their shipments of consumer electronic products alone, at the same rate of growth, should amount to $4.2 billion in 1980.

Imports of consumer electronic products, if projections based upon past data hold, are expected to continue to rise, amounting to about 44 percent of U.S. consumption by 1980.

Long-term prospects

In the long run, two of the more important consumer products now developing are the color video tape recorder and player, and the video disc player. These will provide the consumer with a wide range of options, including the playing of prerecorded video tapes and discs, recording of preselected programs from either an internal or external TV tuner, and a color camera allowing consumers to produce their own tapes.

Although prices vary according to the range of options, the equipment cost is high, and a large market will probably not develop until the anticipated economic upturn occurs and big-ticket consumer products reenter the demand picture.

Most of the equipment of this type now available in the United States is manufactured in Japan. Efforts to expand the use of home video equipment will probably promote the simultaneous growth of a software industry to supply prerecorded tapes.

A new interest has been kindled in projection TV. At the last two Consumer Electronics Shows color TV projection systems have been displayed. In general, these systems have been aimed at commercial and industrial markets; however, consumer models are now being demonstrated. Current prices are quite high, but with increased volume and improved production techniques prices could become more attractive.

Blending with computers

The consumer electronics market of the future will probably go still farther beyond the present traditional entertainment products. Interaction of TV with computer capabilities and person-to-person video communication may well create new markets. The expansion of land-mobile and/or satellite communications systems will add to the growth of the market presently available to the consumer electronics manufacturers—even though some of the products required by these systems are not presently classified as "consumer electronics" items.

Also, maintaining a sufficiently large production base and productivity gains will be needed for U.S. manufacturers to retain their share of the expanding market.

BURNING ISSUE—*Conservative estimates are that 20-25 percent of all fires are deliberately set. Property loss from arson may be as high as 50 percent of total losses.*

National, Local Units Join Forces To Fight Rising Incidence Of Arson

Where there's smoke, there's arson, in an alarming number of cases. For various reasons, accurate statistical information on causes of fire in the United States is hard to come by. However, from the available information, the National Fire Protection Association believes that the following conclusions can fairly reliably be drawn in regard to arson:

- The number of fires caused by arson has more than tripled in the past ten years, from less than 31,000 in 1964 to nearly 95,000 in 1973.
- Monetary losses from fires of incendiary and suspicious origin have increased nearly fivefold in the past decade, from some $68 million in 1964 to $320 million in 1973.
- The ten-year total loss is estimated at $1.7 billion.
- The figures are still rising.

The terms "arson" and "incendiary" are now used interchangeably—both define fires that are intentionally set.

Commerce's National Fire Prevention and Control Administration, established in 1974 (see *Commerce Today*, Nov. 11, 1974), is serving as a clearinghouse for data on fires and fire prevention. The agency will also conduct education training programs for firefighters and educational programs for the general public; support research and development in fire prevention and control; fund research and training programs; and work with state and local fire-fighting units.

The magnitude of incendiary fire losses makes them, according to the U.S. Department of Justice, "one of the major property crimes; more serious, for example, than all robberies or the net losses from all auto theft."

Justice's Law Enforcement Assistance Administration sees as even more ominous the fact that "incendiary fires are consistently increasing much more rapidly than total fires, and also more rapidly than the average increase of major crimes." LEAA sees the overall increase in arson as destined to become "one of the most serious problems of fire services within the next few years," if present trends continue.

Statistics on arson are incomplete, because arson is difficult to prove. Experts believe that the true incidence of arson may be three times as high as published statistics show. For example, incendiary fires may represent 20 to 25 percent of all fires and from 30 to 50 percent of all losses.

An analysis of monthly fire losses in Boston several years ago showed that relatively mild business recessions were correlated with increases in fire losses of from 40 to 180 percent. And these losses continued to rise, although at a less pronounced rate, following an upturn in the economy.

To date, there has not been a great deal of concern on the part of the public at large about the increasing problem of incendiary fires, due partly, perhaps, to the fact that there is little loss of life in incendiary fires.

One difficulty in categorizing types of fires is that a fine line separates incendiary fires from such accidental fires as those caused, for example, by children playing with matches.

Causes of arson

The causes of incendiary fires can vary. A fairly simple delineation follows:

(1) Fires set to collect insurance on destroyed property.

(2) "Political" fires planned by revolutionary groups as a form of dramatizing an issue or intimidating an opponent.

(3) Pyromaniac fires, which are set by a disturbed individual who gets a thrill out of watching the fire.

(4) Fires set to cover up crime by destroying evidence. Such fires may be set to destroy signs of illegal entry, missing merchandise, murder, or stolen automobiles, among other crimes.

(5) Spite, vanity or irrational fires. Alcohol consumption is often a factor in these types of fires.

Arrest and conviction are difficult in

Inadequate Data

Technical fire information is not generally available through present automated bibliographic data bases, according to a study conducted by the Georgia Institute of Technology and financed by a $30,682 grant from Commerce. The study, begun in 1974 and soon to be released, found that while certain peripheral publications containing occasional fire materials are well covered, existing automated bibliographic data bases abstract only very few of the primary fire journals.

Other findings of the study were that the technical report literature is the major source of documents used by American researchers, as indicated by the fact that 62 percent of all references cited in American publications are reports; that 25 percent of the total fire literature is in foreign languages, and therefore not easily accessible to the U.S. researcher; and that for a third of all published documents the time elapsed before inclusion in an automated data base can be two or more years.

Fire Safety Research Available

A newly-released Commerce report on fire safety contains the proceedings of a major symposium on fire safety research conducted at the National Bureau of Standards. Included are the texts of 20 papers presented by prominent researchers from NBS, private industry, universities, other government agencies, and the National Fire Protection Association.

Subjects presented at the symposium include flammability test methods, physiological effects of fire, hazard analysis, standards development, flame chemistry, fire modeling, fire services, effect of fire on building materials, and field investigation methods for firefighters.

The papers discuss in detail the development of children's sleepwear flammability standards and mandatory sampling plans, mechanisms of flame retardants, flame spread and radiant panel test methods, contribution of interior finish materials to fire growth, a field study of non fire-resistive multiple dwelling fires, the Research Applied to National Needs (RANN) program of the National Science Foundation, and related topics.

Copies of *Fire Safety Research,* NBS Special Publication 411 (SD Catalog No. C13.10:411), may be ordered prepaid for $3.10 from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

cases of arson. Nationally, the conviction rate of identified incendiary fires is less than 3 percent. The rate in central cities is better—more than 11 percent. This is still far below the conviction rates in other crimes. For example, clearance rates by arrest for crimes against persons—such as murder, manslaughter, rape and assault—were all greater than 50 percent in 1971, according to Federal Bureau of Investigation data. The auto theft clearance rate for that year was 16 percent.

In Detroit, an arson "ring" consisting of home-repair contractors and insurance adjusters was broken up recently. They had been arranging with home owners to have their houses burn, submit inflated insurance claims, and split the profits.

One reason for the better arson conviction rate in central cities may be that arson investigation there is more specialized. In many of the larger U.S. cities, an arson team consists of a police detective, a fire department investigation officer, and perhaps a prosecuting attorney. In Los Angeles, cooperation has taken the place of specialization. Its police and fire department arson sections are in contact with each other an average of four times a day.

One problem in trying to improve investigation of suspected arson and increase the conviction rate is caused by the overlapping jurisdictions of police and fire departments. Although both groups accept arson investigation as within their areas of responsibility, neither devotes primary attention to it. In general, both agencies cooperate in most localities in the majority of cases.

Under the Federal Fire Prevention and Control Act of 1974, NFPCA funding will provide for better training of firemen. The agency has authorization to build a National Academy for Fire Prevention and Control, and develop a system to enhance the education and training of senior fire officials and firefighters.

The existence of a central, national fire-data center at NFPCA should aid in the investigation and prevention of arson, just as centralization of medical data has enabled better identification and treatment of diseases and other health related problems.

A recognition of the importance of considering arson in evaluating losses by fire, an attempt to obtain more accurate statistics regarding arson, and an effort to teach the appropriate fire department personnel to more readily identify arson-caused fires are on the agenda for the National Fire Prevention and Control Administration as its sets its priorities.

Team Of Ships Seeking To Locate Sunken Hazards To Navigation

A three-month search is under way for 20 sunken wrecks which could endanger Atlantic Coast shipping between Chesapeake Bay and the Florida Keys, as well as along Florida's Gulf Coast. Commerce's National Oceanic and Atmospheric Administration, which is conducting the search, says the wrecks are navigational hazards whose hulls or superstructures lie so close to the surface that they pose a danger to passing vessels.

The search will be made by the 190-ton, 90-foot sister ships Rude and Heck, part of the 25-vessel NOAA fleet which engages in various types of ocean surveys and research.

The general locations of the wrecks have been reported to NOAA's National Ocean Survey, and the ships will try to determine their exact location and the depth of the water above them. They do so by dragging a steel wire between them as they conduct their search. When the wire gets hung on a wreck, scuba divers from the ships examine the wreck and measure the water's depth. Its location is then noted on a nautical chart.

Wire drag ships have been scouring the sea bottom since the turn of the century, when the present system was devised. Although no treasure troves of gold bullion or Spanish pieces of eight have been found, there have been interesting discoveries, including the wrecks of Confederate blockade runners, a 19th century British cargo vessel with thousands of pieces of dinnerware, and Civil War cannons.

Although most of the wrecks have not been identified, the majority appear to be fishing vessels. They include, however, a World War II Liberty ship and a pontoon section of a floating drydock. This wreck has been labeled dangerous to navigation, as have five other sunken vessels which are being sought.

First Puerto Rican Ford Dealership Opens In N.J.

After 20 years in the automotive business, Frank Rodriguez finally got his own automobile agency. In doing so, the minority businessman from New York City also became the first Puerto Rican in the continental United States to obtain a Ford franchise. His agency, "Prestige Ford," is now open in Elizabeth, New Jersey.

Rodriguez obtained the financing for his new business with the technical assistance of the Puerto Rican Forum, a New York City business resource organization funded by Commerce's Office of Minority Business Enterprise.

The native of La Vega, Puerto Rico, came to New York in 1952 after serving six years in the U.S. armed forces. He began working for Ford in 1954.

Rodriguez said he is bringing his staff, "persons with whom I have worked over the years," with him but that an additional 50 jobs will be filled by resident of Elizabeth.

He is optimistic despite the energy crisis and economic slump that have hurt new car sales.

"Sales of automobiles have gone down somewhat, but I see many positive signs that a person who knows what he is doing can take advantage of," says Rodriguez. "You give the client the attention he deserves and what he needs, and he will become your best salesman."

Law Of The Sea Meeting Seeks Meaningful Treaty

The largest assembly of nations in human history will tackle once more in Geneva March 17 a most ambitious and far-reaching task. This is to agree on a global Law of the Sea treaty setting forth the rules for use of ocean resources and the rights and responsibilites of nations in the marine environment.

This second substantive Law of the Sea conference will continue until May 10. The stakes in the effort are as vast as the hopes which inspire it. Success in agreeing upon a viable and effective treaty will establish a new milestone in international cooperation. Failure will leave a host of uncertainties and a renewed incentive for unilateral action by nations on the seas.

"In some respects," says Howard W. Pollock, Deputy Administrator of Commerce's National Oceanic and Atmospheric Administration (NOAA), "we are undertaking to write an international constitution defining how we shall deal with the rights of nations in the oceans."

Pollock is head of the Department of Commerce contingent on the U.S. delegation to the Law of the Sea Conference, and plans to spend the eight weeks of the conference in Geneva. He is Chairman of the Commerce Department Law of the Sea Task Force.

The Geneva sessions follow the first substantive Law of the Sea conference held in Caracas, Venezuela, in 1974. Representatives of more than 140 nations are taking part in these meetings, all with their own viewpoints as to what the treaty should contain and their own stakes in the outcome.

"This is the largest gathering of nations in all the history of mankind," Pollock says, "and notwithstanding our different backgrounds, philosophies, stages of economic development and economic differences, we are trying to develop the law for more than 70 percent of the earth's surface, and that, of course, is the marine environment.

'Enormous task'

"I would not delude anyone by trying to minimize the enormous task which confronts us. I'm very hopeful that we can ultimately resolve these issues, which are really potential areas of continuing conflict.

"I'm optimistic that we can achieve international understanding and agreement on the major subject areas of the Law of the Sea conference. While I don't think we will fully conclude the drafting of all the necessary treaty provisions for a Law of the Sea convention this spring, I anticipate that we will nevertheless accomplish a great deal, and we will move substantially forward in the resolution of some very complex, very controversial issues."

The Commerce Department, Pollock points out, has a broad substantive interest in each of the major areas covered by the Law of the Sea conference, and has experts who will be part of the U.S. team on each of the committees of the conference.

Major committees

There are three major committees. Committee One deals with the deep ocean mineral resources, such as manganese nodules and the whole regimen and machinery that would be set up to manage these resources on an international scale. Committee Three deals with the protection of the marine environment, freedom of scientific research, and transfer of technology. Committee Two deals with all other subjects, including such problems as the breadth of the territorial sea, freedom of transit through straits used for international navigation, archipelagoes and islands and island nations, the economic zone extending the territorial sea off the coastal states, living and nonliving resources of the continental margin, fishing, and the peaceful settlement of disputes.

The problem of fishing rights is a particularly difficult one. Pollock explains that the final treaty package must take into account the widely varying interests represented by a nation's fishing not only for coastal species of fish, but also for highly migratory species off its coasts or elsewhere on the high seas.

Missing ingredient

Commenting on the Caracas conference, Pollock says the key ingredient missing was the political will necessary on the part of nations to make the difficult choices that would ultimately result in a comprehensive Law of the Sea treaty.

However, he suggests that the general unwillingness to negotiate on substantive issues at Caracas was due to the realization that it was not the final session.

Some progress was made at the conference, he adds, both in public exchanges and in private discussions, "and now for the first time there are clear alternatives which will face nations in Geneva."

Women, Blacks Lead Record College Enrollment; Private Schools Slump

College enrollment reached a new high of 8.8 million in 1974 among persons under 35, a 19 percent increase over 1970, according to Commerce's Bureau of the Census.

A national survey made last October points up major changes that have been taking place in the college population over the past ten years. Predictably, the proportion of women, of blacks, and of older and part-time students have all substantially increased.

Women made up 44 percent of 1974 college enrollment, up from 41 percent in 1970, continuing a long-term trend. Black college students increased by 56 percent in the past four years, and in 1974 comprised 9 percent of total college enrollment, compared to 5 percent in 1964. There were also 350,000 persons of Spanish origin in college in 1974, about 4 percent of the college student body.

Older students

Although enrollment figures have been collected on persons 35 years and older only since 1972, their numbers increased by 30 percent during 1972-74 to 1 million. Eighty percent were attending part-time. A larger proportion of 1974-college students were enrolled part-time than in the previous 10 years. The increase in part-time college students is due to the large increase in the total of persons 25 years and older attending college. Since the fall of 1970, the number of 18- to 24-year-old college students increased by only 9 percent while enrollment of persons 25 to 34 years old increased 63 percent.

Private schools

Most of the increase took place in public colleges. Private college enrollment has not changed since 1973. In fact, most formal education from kindergarten on takes place in public schools. Total elementary school enrollment was about the same in 1974 as in 1964, 31.1 million and 31.4 million, respectively, but private school enrollment declined from 15 to 10 percent of total elementary enrollment.

On the other hand, about three-fourths of nursery school enrollment is in private schools, and nursery school enrollment is growing despite the decrease in births. During 1964-74, enrollment in nursery schools tripled from about 470,000 to 1.6 million and the proportion of 3- and 4-year-olds in school grew from 10 to 29 percent.

FOOD CHAIN OWNER—*Rev. Ira Anthony (right) waits on customer at his Stop Rite store.*

Aid Puts Minority Store Owner On Road To Success, Despite Detour

From a "sweep-up man" to the owner of a convenience food chain grossing more than a half-million dollars a year was a long journey for the Rev. Ira L. Anthony, a North Carolina minority business entrepreneur. Along the way, Anthony had some help from Commerce's Office of Minority Business Enterprise.

Anthony spent 14 years sweeping floors in Winston-Salem before he borrowed enough money to open a small family grocery store operated by his wife. A visit to OMBE's Forsythe County Economic Development Corp. showed him the possibilities of expanding his Stop Rite store into a chain. With the aid of a counselor from the Forsythe office, Anthony put together a loan package that helped him to finance what at one time amounted to a seven-store chain.

However, all was not smooth sailing—in 1973 Anthony found himself overextended. Some of his operations were unprofitable, some of his personnel were untrustworthy, and some of his own business judgments were faulty. With the help of the FCEDC counselor, he located a black accountant and together the three men worked out a restructuring of his financing that included divesting himself of four unprofitable stores. Now he is back on a sure footing again.

Anthony credits "hard work, determination and . . . constructive dissatisfaction," along with a little help from some friends, with winning him his goal of a successful business. This year he expects to gross $560,000. And in his spare time he still serves as pastor of two local churches.

Calendar For Businessmen

March 31-April 4—New York—Fundamentals of Plastics seminar, Barbizon-Plaza Hotel. Sponsor: New York University School of Continuing Education. For information, NYUSCE, New York Management Center, 360 Lexington Ave., New York 10017. (212-953-7266.)

April 1-4—Chicago—Third Industrial Pollution Conference and Exposition, Conrad Hilton Hotel. Sponsor: Water & Wastewater Equipment Manufacturers Assn. For information, WWEMA, 744 Broad St., Newark, N.J. 07102. (201-622-0166.)

April 7-9—New York—Fundamentals of Metals Technology seminar, Barbizon-Plaza Hotel. For information, New York Univ. School of Continuing Education, New York Management Center, 360 Lexington Ave., New York 10017. (212-953-7266.)

April 7-10—Detroit—1975 Int'l Tool & Manufacturing Exposition and Engineering Conference, Cobo Hall. Sponsor: Society of Manufacturing Engineers. For information, SME, 20501 Ford Road, Dearborn, Mich. 48128. (313-271-1500.)

April 7-11—New York—Structural Foams seminar, Barbizon-Plaza Hotel. For information, New York Univ. School of Continuing Education, New York Management Center, 360 Lexington Ave., New York 10017. (212-953-7266.)

April 10-11—Washington — Managerial Decision Making seminar, Georgetown Univ. For information, Ms. Betsy Girton, SSCE—Continuing Management Education, Georgetown Univ., Washington, D.C. 20057. (202-625-3001.)

April 14—New York—Marine Society of the City of New York 25th Annual Dinner, Plaza Hotel. For information, Marine Society, 80 Broad St., New York 10004. (212-944-9196.)

April 16-17—Arlington, Va.—American Apparel Manufacturers Assn. Technical Forum I, Stouffer's Inn. For information. AAMA, 1611 N. Kent St., Arlington, Va. 22209. (703-524-1864.)

April 16-18—Washington—Effective Administrative Writing seminar, Georgetown Univ. For information, Ms. Betsy Girton, SSCE—Continuing Management Education, Georgetown Univ., Washington, D.C. 20057. (202-625-3001.)

U.S., Iran Set $15 Billion Trade Goal Over Next Five Years; Plan Business Unit

What is called the largest single agreement on trade ever signed between two nations—amounting to $15 billion in non-oil trade over the next five years—has been concluded between the United States and Iran.

Under Secretary of Commerce John K. Tabor, who had traveled to Iran last month to participate in discussions that preceded the agreement, said of it: "The understanding with Iran opens new opportunities and challenges to the economies of both countries and means sales, production and jobs for many companies in America that take advantage of the opportunities which the agreement opens."

Iran's Minister of Economic Affairs and Finance, Hushang Ansary, had emphasized the non-oil aspects of the agreement in his comments at the signing.

The Iranians indicated a number of projects for which they are seeking U.S. private sector involvement. Priority areas include nuclear power, water desalination, prefabricated housing, hospitals, port facilities, fertilizers, pesticides, farm machinery, processed foods, superhighways, and vocational training centers. The total cost of these projects is estimated to reach $12 billion.

Announcement of this major trade development came as the U.S.-Iran Joint Commission met for the second time in Washington, March 3-4. Secretary of State Henry Kissinger and Iranian Minister Ansary headed the delegations. The Joint Commission was established in November 1974 in order to broaden and intensify economic cooperation and consultation on economic policy matters.

The Joint U.S.-Iran Committee on Economic Affairs and Finance, chaired on the U.S. side by Under Secretary Tabor, met concurrently with the Joint Commission, as did the four other committees that have been formed under the auspices of the Joint Commission: Agriculture; Manpower and Technical Cooperation; Nuclear Energy; and Science, Technology, and Education.

Delegates to the Joint Commission agreed that the creation of a U.S.-Iran Joint Business Council could play a useful role in broadening contact between the business sectors in both countries and in facilitating exchange of information on business opportunities, and decided that it should be established immediately.

The commission also agreed that long-term investment from each country in the economy of the other should be on terms and conditions assuring mutual benefit, subject to prevailing rules and regulations in each country. Delegates agreed on the importance of public awareness of the nature and objectives of the investment policies of the two countries, including the job-creating aspects of capital input.

Substantial progress was made towards conclusion of agreements in several other areas. Negotiations were continued on an Agreement on Cooperation in the Civil Uses of Atomic Energy. This agreement will provide for a broad exchange of information on the application of atomic energy to peaceful purposes, and for related transfer of equipment and materials, including enriched uranium fuel for Iran's power reactors.

The commission agreed to emphasize scientific programs in the fields of oceanography, seismic studies, geological and mineral surveys, remote sensing applications and radio astronomy. It was agreed to increase contacts in the field of higher education. In order to facilitate exchange of technical specialists, the two co-chairmen signed a reciprocal agreement for technical cooperation.

The Joint Commission will meet again before the end of 1975 in Tehran. The working committees will continue to meet frequently to carry on commission work.

How To Join Council

American businessmen interested in joining the planned U.S.-Iran Joint Business Council can obtain details by calling Helen Burroughs of the Commerce Department's Commerce Action Group for the Near East, on 202-967-3993.

A recent *Commerce Today* summary of economic conditions in Iran had emphasized how the increases in world crude oil prices have boosted Iran's foreign exchange earnings to well over $20 billion a year and provided a dramatic stimulus to the pace of economic development.

Capital investments under Iran's ambitious fifth plan (1973-78) are now projected at $69.6 billion, or almost double the amount originally set in March 1973. Private-sector investments account for about 35 percent of this projected figure. The sectors receiving the largest inputs of capital are housing, petroleum, heavy industry, communications, water and power.

Iran has long boasted one of the highest sustained economic growth rates in the world. Moreover, among the oil exporting countries of the Middle East, Iran alone has an economy sufficiently strong and diversified to put its oil wealth to work. The real GNP growth rate, which averaged more than 11 percent a year between 1964 and 1974, jumped to 32.8 percent during 1973-74 and is expected to exceed 40 percent in the current Iranian calendar year (ending March 1975). The government estimates that per capita GNP will reach $1,570 this year, a threefold increase since 1972.

Urgent needs for trained manpower in every sector of the economy far exceed the domestic supply; the government is working hard to reduce illiteracy and to develop adequate vocational training programs. An influx of foreign managers and technicians is taxing hotel facilities in Tehran and other principal cities.

The inflation rate is now estimated to be in excess of 20 percent a year, and the government has taken a number of steps to combat it, including import liberalization, selective price controls, and subsidized prices for certain basic commodities. Substantial efforts are under way to modernize the principal seaports, which are critically backlogged, and to expand the country's internal transportation and telecommunications networks.

With rising disposable incomes, Iran's 33 million people are placing ever-increasing pressure on the country's limited agricultural resources. Yet, despite impressive progress in irrigation, mechanization and use of chemical fertilizers, Iranian agriculture lags behind the rest of the economy, and large imports of wheat and rice wil be needed this year.

U.S. Position In Manufactures Market Slips Marginally

The U.S. share of world exports of manufactures, excluding shipments to this country, slipped marginally to 21.9 percent in the third quarter of 1974, using data expressed in U.S. dollars reflecting constant (first quarter 1971) exchange rates. This small decline in share, which had remained virtually unchanged in the previous quarter, resulted from a sharp slowdown in the growth of U.S. exports to foreign markets. The other leading suppliers posted a slightly higher rate of growth in deliveries than those of the United States, although their shipments also decelerated.

U.S. exports of manufactures climbed by 6 percent in July-September 1974 to reach a seasonally adjusted total of $16.8 billion. At the same time, those of the 14 competitor countries rose by 7.3 percent. Contributing to the sluggishness in both U.S. and other suppliers' exports of manufactures was the slackening in worldwide economic activity which dampened demand for foreign goods.

When trade is expressed in U.S. dollars reflecting exchange rates prevailing during each quarter, the value of world exports of manufactures is higher, and the U.S. share therefore lower, than when *constant* exchange rates are used, since most major currencies have generally appreciated against the dollar since April 1971. In the July-September quarter, the dollar was, on the average, stronger relative to the principal foreign currencies than in the preceding quarter. Valuing foreign suppliers' exports at *current* exchange rates, a gain of only 5.3 percent was recorded in their exports of manufactures and the U.S. share inched up to 18.8 percent.

As mentioned in previous reports in this series, neither method of measurement provides an entirely satisfactory view of the U.S. export performance relative to that of other countries. In order to provide continuity with preceding articles until a more accurate method of measurement can be developed, the analysis that follows is based on the other 14 suppliers' exports converted from national currencies to U.S. dollars at constant rates.

Losses in most products

The modest decline in the U.S. position reported during last year's third quarter stemmed from losses of around half a percentage point in nonelectric machinery, "other" manufactures, and chemicals. Partly offsetting these declines was a substantial increase in the U.S. share of the electric machinery market.

The U.S. share reduction in nonelectric

U.S. Share Of World Exports Of Manufactures

Adjusted for Seasonal Variation

Commodity	U.S. exports (million dollars)	U.S. share of world exports to foreign markets[1] (% based on current rates of exchange[2])	U.S. share of world exports to foreign markets[1] (% based on constant rates of exchange[2])
Manufactures, total			
1973 1st quarter	10,010	18.6	21.0
2nd	10,898	18.2	21.6
3rd	11,732	17.5	21.9
4th	13,035	18.7	22.5
1974 1st	14,232	19.2	22.0
2nd	15,863	18.6	22.1
3rd	16,819	18.8	21.9
Chemicals			
1973 1st quarter	1,230	18.0	20.4
2nd	1,343	17.8	21.3
3rd	1,501	17.1	21.7
4th	1,717	19.3	23.3
1974 1st	2,018	18.5	21.4
2nd	2,208	17.0	20.5
3rd	2,360	16.9	20.0
Nonelectric machinery			
1973 1st quarter	2,718	24.7	27.5
2nd	2,916	24.0	28.0
3rd	3,221	23.7	29.1
4th	3,412	24.2	28.7
1974 1st	3,611	24.7	28.1
2nd	3,990	25.5	29.9
3rd	4,465	25.4	29.3
Electric machinery			
1973 1st quarter	1,139	21.4	24.1
2nd	1,220	20.7	24.5
3rd	1,324	19.8	24.7
4th	1,413	20.4	24.6
1974 1st	1,616	22.0	25.3
2nd	1,743	21.4	25.5
3rd	1,928	22.6	26.3
Transport equipment			
1973 1st quarter	2,472	26.5	29.6
2nd	2,614	25.0	29.4
3rd	2,640	23.2	28.6
4th	3,084	25.9	30.6
1974 1st	3,140	28.6	32.3
2nd	3,499	26.2	30.3
3rd	3,613	26.5	30.4
Other manufactures			
1973 1st quarter	2,451	11.5	13.1
2nd	2,805	11.7	14.0
3rd	3,046	11.4	14.5
4th	3,409	12.3	14.9
1974 1st	3,847	12.7	14.7
2nd	4,423	12.6	15.2
3rd	4,453	12.4	14.6

Note: The term "manufactures" refers to chemicals, machinery, transport equipment, and other manufactures except mineral fuel products, processed food, fats, oils, firearms of war, and ammunition. U.S. data have not yet been revised to reflect the new seasonal adjustment factors released at the end of February.

[1] World exports are defined as exports from the 15 major industrial countries. Percentage shares are based on values excluding shipments to the United States. These nations, which account for 80 percent of world exports of manufactures to foreign markets, are: United States, Austria, Belgium-Luxembourg, Canada, Denmark, France, Federal Republic of Germany, Italy, Netherlands, Norway, Sweden, Switzerland, United Kingdom, and Japan.

[2] In the two series of U.S. percentage shares presented, the first column shows shares based on the official rates of exchange for merchandise shipped during each period, and the second column shows shares based on data measured at rates of the first quarter 1971, prior to widespread currency changes.

machinery was a reversal of the large increase in the second quarter. Although U.S. sales rose slightly faster than in the previous three-month period, those of other suppliers accelerated so much more rapidly that they exceeded the gain recorded by this country. Thus, the U.S. position in the world market fell to 29.3 percent, but, nevertheless, remained well above its average level of the previous year. U.S. shipments of many types of commodities, particularly agricultural machinery, heating and cooling equipment, and nonagricultural tractors, were buoyant. Conversely, sales of computers and metalworking machinery were sluggish.

In the market for "other" manufactures, a diverse group encompassing semifinished goods and consumer nondurables, the U.S. standing fell to 14.6 percent as the nation's exports showed little advance from the level of the previous quarter. Increases in shipments of iron and steel tubes, pipes, and fittings as well as paper and paperboard were largely offset by decreases in sales of nonferrous metals, especially copper, and textile yarns and fabrics.

A sizable deterioration also occurred in the U.S. position in the chemicals market, the third consecutive quarterly decline. The fall-off to 20 percent brought the nation's share to its lowest point of the past two years. The slowdown in overall U.S. chemicals sales was attributable in large measure to the sharp fall in deliveries of organic chemicals, particularly to the Netherlands and Japan. On the upside, exports of fertilizers doubled in value from the previous quarter.

The U.S. position was virtually unchanged at 30.4 percent in the transport equipment market following a large loss in the preceding period, as shipments by both U.S. and other suppliers slackened considerably. Primarily responsible for the slowdown in U.S. sales was the sizable drop in exports of civilian aircraft, especially to Germany and Japan. At the same time, however, deliveries of passenger cars and auto parts and accessories to Canada climbed notably, after declining the previous quarter, and shipments of automotive products to other countries also advanced.

Continuing the uptrend evident since early 1973, the U.S. share in electric machinery climbed strongly to 26.3 percent as sales rose more rapidly than those by other suppliers. Larger shipments of electric power machinery and switchgear contributed most to the U.S. gain but those of telecommunications equipment were also a key factor. Partially offsetting these gains were modest declines in exports of tubes, transistors, and semiconductors.

Reciprocal Values Of Dollar, European Currencies Given

What is the value of the dollar in terms of European currencies, the value of such currencies in terms of dollars, and their values in relation to each other? Answers at a glance are provided in the table below, prepared by Paul A. Mayer of the Office of International Marketing in the Commerce Department's Bureau of International Commerce.

The table answers the following four types of questions:

How many foreign currency units will one dollar buy? Example: $1 will buy 34 Belgian francs (Bfrs); see line 1, column c.

How many dollars can be bought for 100 currency units of a given foreign country or, respectively, for 1 British pound or for 1,000 Italian lire? Example: For 100 Belgian francs, you can buy $3; see line 3, column a.

How many currency units of a listed country will buy 100 currency units of another country or, respectively, £1 or 1,000 lire? Example: 100 Belgian francs will buy 12 French francs or 6.75 German marks or 47 Austrian schillings; see line 3, columns, e, f, and b.

How many currency units of a listed country will buy 100 currency units of another country or, respectively, £1 or 1,000 lire? Example: To buy 100 French francs, you have to spend 820 Belgian francs (line 5, column c); to buy 100 German marks, you have to spend 1,500 Belgian francs (line 6, column c); and to buy 100 Austrian schillings, you have to spend 210 Belgian francs (line 2, column c).

Suppose a U.S. businessman at the end of a visit to Belgium has a 1,000-Belgian-franc bill left in his wallet. Looking at line 3 ("Belgium") of the table, he finds that he can get $30 for that bill (column a); if he travels from Belgium to Germany, he need not change his Belgian money first back into dollars and then into Germany currency—he can change it directly into 67.50 German marks (column f); and should he travel from Belgium to France, he can change his 1,000 Belgian francs directly into 120 French francs (column e).

The prices are current as of March 6. Some figures are rounded off, with a maximum inaccuracy of 5 percent. The table is intended to serve merely as a rough desk tool. For close financial calculations, up-to-the-minute information should be obtained from banks or other financial institutions specializing in foreign exchange.

Country	Currency Units	Value In	a $	b S	c Bfrs	d Dkr	e Ffrs	f DM	g £	h Lit	i Hfl	j Nkr	k Esc	l Pts	m Skr	n Sfrs
1. United States	Dollars	$ 1		16	34	5.40	4.15	2.30	0.41	630	2.35	4.90	23.75	55	3.90	2.40
2. Austria	Schillings	S 100	6		210	34	26	14.50	2.50	3,900	15	30	148	345	24	15
3. Belgium	Belg. Francs[1]	Bfrs 100	3	47		16	12	6.75	1.20	1,850	7	14	70	160	11.50	7
4. Denmark	Danish Kroner	Dkr 100	19	300	630		77	42.50	7.60	11,600	43.50	91	440	1,020	72	45
5. France	French Francs	Ffrs 100	24	385	820	130		55	10	15,200	57	120	570	1,325	94	58
6. Germany	Deutsche Marks	DM 100	44	700	1,500	230	180		17.75	27,500	102	213	1,030	2,400	170	104
7. Great Britain	Pounds Sterling[2]	£ 1	2.40	40	83	13	10	5.60		1,500	5.75	12	58	135	9.50	6
8. Italy	Lire (Lit)	Lit 1000	1.60	25	54	8.50	7	3.75	0.70		3.75	8	38	87	6.20	3.80
9. Netherlands	Holl. Florins	Hfl 100	42.75	680	1,450	230	175	98	17.50	27,000		208	1,010	2,350	165	102
10. Norway	Nor. Kroner	Nkr 100	20.50	325	612	110	85	47	8.30	12,850	48		480	1,120	80	49
11. Portugal	Escudos	Esc 100	4.25	67	145	23	17.50	10	1.75	2,650	10	20		230	16.50	10.25
12. Spain	Pesetas	Pts 100	1.80	30	62	10	7.50	4.25	0.75	1,150	4.25	9	43		7	4.30
13. Sweden	Swedish Kroner	Skr 100	26	410	870	140	105	60	10.50	16,000	60	125	610	1,410		62
14. Switzerland	Swiss Francs[3]	Sfrs 100	42	660	1,420	225	170	96	17.10	26,250	98	204	990	2,290	162.50	

[1]Used also in Luxembourg. [2]Used also in Ireland. [3]Used also in Liechtenstein.

Mission Sees Spain, Switzerland As Good U.S. Electronics Markets

Two countries linked by the Commerce Department in a recent trade mission—Switzerland and Spain—offer U.S. manufacturers of electronics growing markets for their products. Switzerland continues as a strong customer, despite economic uncertainties. Spain, a smaller market, is expected to enjoy a steep growth curve in the immediate future.

These are the conclusions of an eight-company group that recently visited Zurich, Bern, Barcelona, and Madrid. The participants are looking forward to significant sales in electronic components, test and production equipment, and specialized communications systems—components leading the other two segments of the industry in sales potential.

Products represented by the mission members included printed circuit boards, diodes, transistors, transducers, tantalum and ceramic capacitors, test equipment, filters, inter-connection devices, audio broadcast automation systems and visual intercom display systems.

During the 10-day visit, 200 appointments were completed with end users and prospective distributors or agents. "I now have a feel for future business that I could not easily have gotten in any other way," said Alan D. Rubendall of West-Cap Sales International. Actual sales and 12-month projections by the group total $3.5 million, with about 18 representation agreements expected to be signed during the year.

"Both countries offer significant opportunities," observes Mission Director Donald L. Schilke of the Commerce Department's Chicago Regional Office. Schilke says that his group confirmed market research prepared earlier by the U.S. Embassies in Bern and Madrid, and some of these findings follow:

Quality sells in Switzerland

A chronic labor shortage and stiff competition for Swiss industrial exports abroad combine to make the increasing use of electronics in Swiss industry essential. The reputation for quality and technological superiority of the U.S. electronic industry's test and production equipment and components, especially capacitors and integrated circuits, is of prime importance to Swiss end-users. These Swiss manufacturers of sophisticated industrial controls and other electronic gear used in precision machines, communications, and watches play a vital role in European electronics. Some manufacturers export almost their entire production. Thus, to keep ahead of their competition they must stay at the cutting edge of the state of the art, Schilke explains.

Best sales prospects in Switzerland include transistors, diodes, rectifiers, zeners, printed circuit boards, ceramic capacitors, filters, inductors, linear variable differential transformers and gage heads.

Mission members reaffirmed that the best penetration effort comes from a strong sales base—agent/distributor or own sales office—in the country. The few participants who already had established distribution in Switzerland or Spain reported clarifying many technical difficulties. They also said that the official U.S. presence enabled them to meet and sell top executives of several accounts heretofore unreachable by local representation.

Spain's electronic base expanding

Spain's present inflationary level is now pushing 20 percent, Schilke observes. Faced with the choice of maintaining an acceptable rate of growth and a minimum of unemployment or applying the brakes to control price levels, the government has opted for the former.

The INI (Instituto Nacional de Industria), the autonomous government holding company having direct participation in some 58 enterprises which account for about 10 percent of Spain's gross industrial production, is planning a major expansion of its activities in order to compete with imports and expand its export base. This effort, which among other benefits will support a positive but sagging balance of payments, has given impetus to the industrial/commercial sector of Spain's electronics industry. Local producers of industrial/commercial electronic equipment rely mainly on imports for component requirements, especially advanced components which Spanish manufacturers are not in a good position to supply. It is in this area that mission members identified a small but fast-growing market. As for electronic testing and production equipment, few local companies are sufficiently capitalized to afford sophisticated equipment.

Spain's telecommunications equipment industry is an extremely bright spot as an end-user. Not only is it a major foreign exchange earner, but it is viewed by other European manufacturers as quite sophisticated, with an excellent research program. Growth in this industry will be sustained by plans to install 2.5 million telephones during the next few years, which will in turn require completely automated controls. The professional electronics equipment industry should also continue to grow, as the government has made this a priority area for development. Expansion in these two sectors will further stimulate imports of components.

Best U.S. sales prospects are to be found in semiconductors, diodes, transistors and integrated circuits, sectors already dominated by U.S. suppliers. While resistors are an overall net export from Spain, there is a market for more sophisticated resistors or substitutes.

High tariffs on electronics, which may undergo liberalization, are an import deterrent; however, the superior quality of U.S. products makes them competitive with those of other West European suppliers, and electronic components and equipment are unavailable locally.

The mission participants generally felt that distributors were essential to Spain's development, although a few members felt that they could successfully sell direct to various categories of end-users. Customers look for immediate deliveries from a stocked warehouse or air freight shipments.

Mission members were: Peter Bette and Alain Renaud, Teradyne Inc., Boston; Eric Kane, Bunker Ramo Components Group, Oak Brook, Ill.; Harry Miller, CSR Industries, East Farmingdale, N.Y.; Frank O'Neil, Transitor Electronics, Bennington, Vt.; Alan Rubendall, West-Cap Sales International, San Fernando, Calif.; Howard Schaevitz, Schaevitz Engineering, Pennsauken, N.J.; Eric Wright, Control Design Corp., Alexandria, Va.; and Werner Yee, Signacom Systems Inc., Redwood City, Calif.

Semiconductor Fair Is Set For Zurich

Europe's fast-growing semiconductor market is the target of SEMICON/EUROPA, an international fair featuring semiconductors, to be held in Zurich Nov. 3-5. The fair is being sponsored by the Semiconductor Equipment & Materials Institute in New York. U.S. firms interested in exhibiting their products should write: Golden Gate Enterprises, Inc., Marina Playa Office Park, 1333 Lawrence Expressway, Santa Clara, Calif. 95051. Telephone, 408-241-7400.

Boycott Investigation

Recent allegations that some U.S. banking and shipping enterprises are violating the Export Administration Act by failing to report requests to participate in the Arab boycott of Israel are under investigation by the Commerce Department. Under regulations issued pursuant to the act, U.S. exporters have the responsibility to report to the Commerce Department any requests made to them to participate in international trade boycotts or other restrictive trade practices.

INSTRUMENT SHOW, MEXICO—*Norman Brown of Extech (at left) and Hal Yeager of Ionics listen as Extech's new distributor talks with potential buyer.*

Mexico's Growing Industrialization Spurs U.S. Instrument Show Sales

The expanding industrialization of Mexico is reflected in its market for process control instrumentation—now growing by 15-20 percent annually. A recent exhibition of such equipment at the U.S. Trade Center in Mexico City identified some of the special growth factors in this situation:

- A major need for process control instruments is being generated by the sustained growth of the petroleum and petrochemical, steel and other heavy industries, and new electric power facilities.
- There is increasing pressure on all Mexican industry to produce quality products for the international market.
- On the other hand, as in many other areas of the Mexican import market, local manufacture of instruments is becoming a bigger and bigger obstacle to purchases from the U.S.
- Still, while this factor tends to restrict the import of certain instruments that are already produced in Mexico, the production process itself creates a demand for more sophisticated equipment.

Sales totaling more than $350,000 were reported by the show participants. Sales in the next 12 months are projected at $5.8 million, of which $1.2 million are estimated by the new-to-market firms. Fourteen companies gained new representatives in the Mexican market—including an arrangement for manufacture under license, which is rarely concluded during a show. High-level technical conferences were held in conjunction with the exhibition by the Instrument Society of America.

High sales demand was noted for pH meters and recorders; gas alarm systems; analog annunicators, sequential event recorders; electronic control, process testing and recorders; oxygen analyzers; mini computers; timers; stepping-switchers; thermocouples and cable; transducers indicators; batching reporters; and analogy and digital programmers.

One company, promoting automatic tank level gages, internal safety valves, vacuum and pressure vents and flame arrestors, made valuable contacts with the state-owned petroleum company and electric power commission as well as obtaining 50 other sales leads.

Market testing is a natural byproduct of a U.S. Trade Center show. One company representative was pleased with the response to his product lines but noted the need to educate the market before he could expect substantial sales. Another appreciated the exposure granted by the show but was not blind to possible exclusion of his company's thermocouples due to local manufacture.

U.S. Pollution Control Stockholm Show Draws Scandinavia End-Users

A substantial demand for U.S. pollution control equipment in the Scandinavian market was verified in Stockholm at the U.S. Trade Center's year-end exhibition, Ecology 75. As a result of participation in the show, the Trade Center's third for pollution control equipment, 34 U.S. companies expect sales of about $4 million to Nordic end-users in the next year.

All products displayed were well received. Of exceptional interest was equipment shown by three firms for detecting, containing and removing oil spills. A portable laboratory, with equipment needed for 23 standard analytical tests housed in a suitcase size container, commanded considerable attention.

The following were the best sellers at the exhibition: Air cleaners, air quality monitors, boom skimmers, cleansers, conductivity meters, dispersants, dissolved oxygen analyzers, filters, gas detectors, gasoline detectors, gas chromatographs, glass (high temperature), noise filters, oil spill detection systems, oil spill containment systems, oil spill removal systems, oil-water separators, organic carbon analyzers, oxygen demand analyzers, portable laboratories, personal sample pumps, pH equipment, SO_2 analyzers, spectrofluorometers, spectrophotometers, sound abatement barriers, and temperature registration instruments.

One new-to-market firm entered Ecology 75 through its newly-appointed Scandinavian agent, who reported a highly successful introduction to the market of the principal's air sampler pump used for environmental testing. The company registered 225 good end-user leads and talked with representatives of virtually all the largest Swedish companies of interest. Distributors will be appointed in Denmark, Finland and Norway.

Another company entered the Nordic market by exhibiting air cleaners and sound abatement barriers at Ecology 75. At the show's end, the company's president was negotiating seven representation agreements and one joint venture agreement, and predicted first year sales of $1.5 million. A company new-to-exporting exhibited oil spill equipment, including containment booms, skimmers, pumps and absorbents. The president of the firm was evaluating four potential agents and two license agreements as the show closed.

U.S. Exhibition Results In Brief

The following summary reports have been received on U.S. overseas commercial exhibitions. Further details and marketing data derived from these exhibitions will be published as available.

Microwave Technology Exhibition and Conference. U.S. Trade Center, Paris, Feb. 3-7. Exhibitors, 29, representing 69 firms. Floor sales, $372,000; 12-month projection, $9.3 million, of which $1.4 million is estimated by new-to-market firms. Agency agreements, 5; under negotiation, 3. Select audience of 1,085 attended 2-day technical conference.

American Computer Technology 1975. U.S. Trade Center, Tokyo, Feb. 3-8. Exhibitors, 42. Floor sales, $142,000; 12-month projection, $15.8 million, of which firms new-to-export or -to-market estimate about $4 million. Representation agreements, 1; under negotiation, 8.

Materials Test Instrumentation and Equipment. U.S. Trade Center, Frankfurt, Feb. 11-14. Exhibitors, 25. Floor sales, $84,327; 12-month projection, $3.5 million, of which $176,000 estimated by new-to-market firms. Agency agreements, 1; under negotiation, 7.

Worldwide Business Outlook

Soviet Stability Is Costly; Trade Keyed To Financing

The Soviet economy has been spared the burdens of recession and high inflation, but at a heavy cost: sluggish overall performance, a necessarily massive capital investment program for a relatively modest growth in industrial output, often wasteful and somewhat inefficient utilization of raw materials, and heavily dampened consumer demand with concomitant popular dissatisfaction.

The U.S. Embassy in Moscow, making this assessment, adds that the Soviet Union remains strongly interested in expanding trade with the United States, and in Soviet eyes the technological and quality levels of American products remain second to none. Despite this favorable influence, the actual level of U.S.-USSR trade after 1975 will be strongly dependent upon the relative cost of financing transactions in U.S. capital markets as opposed to those of other countries.

When compared with the problems most market economies confronted in 1974, the Soviet economy remained remarkably stable. The value of industrial production rose by 37 billion rubles in 1974 to 490 billion rubles (1 ruble = about $1.42). Agricultural production in 1974 amounted to 94 billion rubles, a decline of almost 4 billion rubles from the 1973 all-time peak. Soviet GNP in 1974 was 605 billion rubles (at 1971 prices).

Blessed with relatively inexhaustible natural resources, the USSR would be self-reliant in the supply of all types of mineral fuels and electrical energy were it not for its obligations to provide large amounts of these commodities to its CEMA (Council for Economic Mutual Assistance) partners in Eastern Europe. As it is, the Soviet Union imports relatively small amounts of crude oil, refined petroleum products, and natural gas; if necessary, with relatively little discomfort the USSR could manage without importing any of these products.

Domestic economic tranquility is heightened by the fact that the Soviet Union has a full-employment economy; regional labor shortages have in fact hampered industrial development in some geographic areas. Further progress was made in 1974 toward raising the countrywide minimum wage to 70 rubles per month. Income taxes were reduced on monthly wages between 70 and 90 rubles. For the average wage-earner consumer inflation is not a major problem on purchases of goods in State stores. On the other hand, costs in farm markets (where the law of supply and demand is in effect) and in the informal service industry (i.e., moonlighting by plumbers, electricians, etc.) have risen dramatically in recent years. Charges for housing, health care, child day-care centers, etc., remain at very low levels.

The costs of such stability to the country's economic progress are very high. These result from structural deficiencies in the economy caused by extensive reliance on Marxist-Leninist ideology by economic policy-makers. One such cost is the sluggish performance of the economy, which is not expected to improve perceptibly in 1975. By this is meant the chronic non-fulfillment of annual plan targets within the overall Five-Year Plan (FYP), in this case Ninth FYP (1971-75).

Besides the normal sub-par performance in the industrial sector, planned increases in agricultural output are often difficult to achieve and continue to be dismayingly dependent on whims of the weather. Agriculture remains largely labor intensive, and yields per given area for most crops are well below those of the United States and other countries where the sector has become highly industrialized. For 1974 gross agricultural output in the USSR declined in comparison with 1973 despite strong growth in the livestock sector. The drop is directly attributable to plan underfulfillment in production of grains, sugarbeets, sunflower seeds, potatoes, and vegetables.

Another problem area

Another problem area is the continuing policy of achieving growth in production through massive annual infusions of capital investments. In 1974, for example, industrial output rose 8.0 percent (37 billion rubles). Taking into account the decline in agricultural output, the total value of increased production in 1974 was around 33 billion rubles. To achieve this increase, capital investments of 105.7 billion rubles were required.

In addition, the 1974 results revealed an unhealthy relationship between the level of capital investments, increase in amount of fixed productive assets (plant and equipment), and increase in overall national income (value of industrial and agricultural output above costs and available for re-investment and savings). In comparison with 1973 the interrelationship of these three key indicators has changed; the continuing high level of investments is resulting in much lower increases both in amounts of fixed assets and national income. This in turn is attributable to an unusually high level of uncompleted projects as well as previously unplanned diversions of investment capital during 1974 to a crash program for agricultural industrialization. The revised 1975 targets do not suggest that a significant improvement in this situation is likely.

The Soviet economy is further troubled by the twin problems of waste in raw material production and utilization, and retention of imprecise, occasionally irrelevant quantitative indicators for measuring industrial performance. An estimated 10 percent of Soviet mineral fuels, for example, which are also vital raw materials for industrial production, is irretrievably lost in the extraction and transportation processes. Quantitative indicators lead, among other things, to above-norm inputs of raw materials per unit of output so as to allow for easier plan fulfillment by plant managers.

In the consumer field, 1974 presented a mixed picture. Average monthly wages for State employees rose by 4.3 percent to 140.7 rubles. Annual wage increases, plus increases in production of consumer goods and trade turnover, have meant that the average Soviet family of four is now able to purchase 575 rubles worth of goods more than it could in 1971 at the start of the Ninth FYP. Available housing increased in 1974 by some 2 million apartments, which represents an underfulfillment of the plan target for the year.

Stringent government controls on increases in the money supply, together with extremely high rates of "turnover" tax (particularly on high-demand products), serve effectively to dampen consumer demand and latent inflationary pressures. The increasing sophistication of the Soviet buyer and the continuing paucity of quality merchandise in shops will give financial planners fresh problems in keeping 1974 trade turnover (and money in circulation) at desired levels. A further problem is the effective loss represented by the considerable capital investment in increasing production of consumer items too low in quality to find buyers. The day when the Soviet buyer will purchase any and all goods made available is gone forever.

Another problem linking retail trade and overall industrial development in the USSR is the relative disinclination of the Soviet worker to increase his productivity. Monetary inducements for encouraging harder and more efficient work are largely ineffective due to the relative scarcity of high-quality consumer goods available to the public regardless of the levels of workers' disposable incomes. In 1974 industrial labor productivity rose by 6.5 percent, well below the planned rate of 7.2 percent.

Possibly to reinforce other efforts to

SOVIET TIMBER EXPERTS VISIT PACIFIC NORTHWEST—*Members of a Soviet trade mission that recently toured northwest U.S. wood processing plants and observed American logging techniques are, from left: Valentin F. Rudenko, Director, USSR Timber Institute; Yury S. Komarov, Director, Timber-Industry-Transportation Institute: Vasily F. Zaretsky, Deputy Minister and delegation leader; Halida Ganeyev, interpreter; Yury A. Yagodnikov, Chief of Industrial Administration of the Timber Industry. The Soviet delegation was met in Seattle by representatives of the Pacific Northwest International Trade Council.*

restrain consumer demand, the output of consumer-type goods was outstripped in 1974 once again by that of producer goods. This trend, which is expected to continue in 1975, contradicts most annual goals set out in the Ninth FYP and the policy of "consumerism" enunciated at the XXIV Party Congress.

Modest structural changes in management of the economy, begun in 1973, are expected to culminate in 1975 with formalization of a concept for linking research and development institutions with industrial enterprises into so-called scientific-production associations, intended to promote translations of technological finds into industrial practice.

Recent official statistics show a 21.5 percent increase in the Soviet Union's foreign trade turnover for 1974 over the previous year (31.3 billion rubles in 1973 and 38 billion rubles in 1974). While transactions between members of CEMA still dominate overall Soviet trade by volume, in money terms the USSR's trade with countries outside the Eastern European Communist group was approaching the value of Soviet-CEMA trade. Attributable both to rapidly inflating prices on imports and exports (noticeable even in deliveries under existing contracts) and to rising volume, this phenomenon should continue throughout 1975.

A major element in the 35.9 percent decrease in U.S.-USSR trade in 1974 was diminished Soviet purchases of grain and other agricultural products, which dropped from $903 million in 1973 to about $250 million during the first 11 months of 1974. Agricultural commodities apart, trade turnover between the United States and the Soviet Union grew an estimated 28 percent in 1974.

In 1974 the USSR's foreign exchange position improved dramatically as a direct consequence of the worldwide raw materials shortage and resulting price increases for crude oil and chrome ore, among other commodities. Although it may prove transitory as domestic requirements reduce Soviet petroleum exports, this phenomenon seems certain to last through 1975. The USSR's current favorable trade position will probably be reflected in the immediate future through increased payment in cash for the most urgently required foreign equipment and technology. However, the Soviet Union will not hesitate to augment the level of its foreign indebtedness as attractive long-term credit opportunities become available.

Increased Soviet perception that the economy of the USSR is failing to keep pace with Western industrial societies will continue to stimulate Soviet imports. Having apparently ruled out basic and far-reaching economic reform, Soviet leaders seem to have decided to continue seeking abroad the advanced equipment and industrial processes they look upon as necessary to accomplish a rapid modernization of domestic industry.

There is little doubt that the USSR has long viewed the United States as a hoped-for principal partner in the process of updating the Soviet economic machine. The Soviets' long admiration of the quality and durability characteristic of American products finds frequent expression: in Moscow one often hears Soviet senior citizens reminiscing about the Studebaker trucks they drove during World War II and the U.S.-made tractors they used 50 years ago.

While, other factors being equal, Soviet leaders would favor a quantum leap forward in bilateral trade with the United States, under present conditions the level of U.S.-USSR trade after 1975 will depend in large part on the cost of export financing in the United States as compared with similar costs from alternative Western suppliers. Nearly as important will be Soviet recognition of the trade-off between purchases of better-quality U.S. industrial equipment at somewhat higher prices versus acquisition of less durable third-country products at lower prices.

According to the Soviet economic press, current changes of emphasis in industrial production within the Soviet economy are favoring expansion within the machine-building, chemical and petrochemical industries and in the power generation sector. The contribution of these areas to overall industrial production has risen from 31 percent in 1970 to 35 percent in 1974, and they would appear to be particularly promising target sectors for U.S. exporters.

Other high potential target areas for U.S. sales to the Soviet Union include:

- Plants producing component parts for the manufacture of automobiles, trucks, buses and tractors;
- Ground and airborne aviation equipment, including items for airport modernization (e.g., baggage handling);
- Equipment for mechanization of agricultural activities and for improved processing of agricultural commodities;
- Component parts for expanding and improving quality of Soviet oil and gas pipeline networks.

Prospects for American companies wishing to enter into trading relations with the USSR are favorable. It should be understood, however, that Soviet business practices are idiosyncratic and often seem arduous and time-consuming to foreigners. Centered in Moscow, the foreign trade establishment is massive and transactions are concluded through one or more of the approximately 60 Soviet Foreign Trading Organizations with participation of the Soviet Foreign Trade Ministry, which maintains a monopoly on Soviet external trade.

Experienced businessmen find periodic visits to Moscow essential, although access to end-user factories and plants is difficult to arrange as well as stringently controlled. At this time, 18 U.S. firms have received permission to station a company representative in Moscow. This official accreditation has been granted by one of three Soviet organizations which play an integral role in the USSR's foreign trade: the Ministry of Foreign Trade, the State Committee for Science and Technology, and the Foreign Trade Bank.

Finally, Soviet foreign traders traditionally bargain hard to shave prices on quotations and to obtain the most advantageous credit terms.

Within this framework of standard practice, however, American business visitors will find goodwill and a deep interest in expansion of commercial and industrial ties with the United States.

Canada Fights Slowdown; Demand Holding Up Well

Canada's economic performance in 1975 is expected to be sufficiently favorable to produce continuing strong import demand. American businessmen having difficulty finding buyers for their products might do well to look north, advises John E. Mellor, Counselor for Commercial Affairs at the U.S. Embassy in Ottawa.

Canada represents a prosperous, strong market, or more precisely several markets stretching from Atlantic to Pacific. While the overall rate of growth is faltering momentarily there are strong points providing a ready market for selected products, as evidenced by current shortages of labor and capital in the prairie provinces.

Canada's economic performance in 1974 was the best among OECD countries: 4 percent real growth in the first quarter of the year compared with the last quarter of 1973, resulting mainly from strong domestic demand.

There was no real growth in GNP in the remainder of 1974, however; and even more of a slowdown is expected in the first half of 1975. Real growth for the full year is predicted from 1 percent (Bank of Montreal) to 4 percent (Finance Minister Turner). Unemployment rose to 6.1 percent in December; and the 12.4 percent rise in the consumer price index during 1974 was the highest in 26 years.

Officials remain confident

But Canadian officials remain confident that the country will avoid a recession in 1975, basing their optimism on an expansionary budget introduced last November, an expected upturn in Canada's principal trading partners as those countries combat recession, and an expected lower growth rate of inflation.

Consumer spending also is expected to hold close to its 15 percent growth rate of last year; spending by all levels of government is estimated to increase 20 percent (up 18 percent in 1974); and outlays by some 220 large corporations (accounting for 60 percent of the total business investment) on new construction, machinery and equipment were expected to be up 30 percent. Increases in intentions were largest for the manufacturing, oil and gas, and electric utilities sectors.

In 1974 total Canadian exports advanced more than 26 percent in value to $31.9 billion, but dropped approximately 7 percent by volume. Exports to the United States, a record $21.3 billion, were up $4.2 billion or 24.5 percent over 1973. Greatly increased crude oil prices, including the export tax, accounted for almost $2 billion, or 46 percent of the increase. Pulp shipments to the United States were up $443 million and newsprint $285 million. Lumber shipments dropped by $375 million. Exports of cars and trucks advanced $255 million and $90 million, respectively; but those of parts and engines declined $150 million. Ore shipments rose $85 million and metal alloys $190 million. Whiskey exports were $36 million lower, at $188 million, because of disrupted production.

The United States accounted for 66.5 percent of Canada's exports in 1974 (67.5 percent in 1973 and 69.3 percent in 1972). The exceptional weakness of automobile sales and housing starts in the United States has been of concern to Canada.

Imports expanded over 35 percent by value (and 4 percent by volume) in 1974 to $31.5 billion. Purchases from the United States rose by 28.5 percent to $21.2 billion, a $4.7 billion increase representing 57 percent of Canada's total import increase. Imports from the EEC (the original six) were up 30 percent, from Japan 41 percent, Latin America 106 percent, and "other countries" 81 percent.

The import increase from the United States was spread over many commodities, principally machinery (up $700 million), motor vehicles and equipment and tools (each up more than $450 million), organic chemicals and plastics (up $200 million), and steel plate and aircraft and parts (each up $130 million). The U.S. share of total imports dropped to 67.5 percent, from 70.5 percent in 1973 and 69 percent in 1972. Latin America and "other countries" expanded their shares, respectively, from 4 to 6 percent and 7.5 to 10 percent.

Opportunities in the market

The volume of Canada's imports in 1975 will depend importantly on the level of capital and consumer spending. At present the outlook in these two sectors is too murky for confident predictions. Business confidence, as surveyed by the *Financial Post* early in December, was reported at a three-year low. Yet, on Dec. 27, Minister of Industry, Trade and Commerce Gillespie predicted optimistically that increased capital investment plus income tax cuts and increased transfer payments would stimulate the economy in 1975.

The index of industrial production declined steadily after March 1974. Mellor expects this trend to continue another six months, particularly if labor strife intensifies, exports decline further, and mineral development does not show improvement.

Housing starts declined from 268,000 in 1973 to 222,000 in 1974. The federal government hopes for a turnaround in the steadily deteriorating situation of the second half of last year, so as to rack up at least 210,000 starts in 1975, and has provided fiscal stimulus. But housing prices have only recently begun to level off and mortgage rates to ease, and Mellor does not expect much of a pickup before mid-year. Sales of major appliances and other durables for the home have followed the downward housing spiral.

Canadian processors reportedly anticipate difficulty meeting the Sept. 1, 1975 and March 1, 1976 deadlines for non-food and food products, respectively, for full compliance with the new federal consumer packaging and labeling requirements for bilingual and metric labeling. Mellor's advice to U.S. exporters is: do not count on an extension.

Commerce District Offices can supply manufacturers with guidelines to help in conforming packaging and labeling with the regulations, as well as with the names, addresses and telephone numbers of Ottawa offices prepared to give advisory opinions and suggest changes regarding packages and labels so as to facilitate and minimize costs of compliance.

Stricter surveillance

U.S. businessmen exporting electrical appliances to Canada should be on notice that the federal and provincial governments of Canada are embarked on stricter surveillance of all electrical products. All forms of electrical products are subject to approval by the Canadian Standards Association before they can be sold in Canada.

Modest temporary (Feb. 20, 1973-June 30, 1974) tariff cuts made by the Canadian Government affected imports of about $1.3 billion worth of consumer goods. More than 50 percent of affected imports came from the United States. Effective Nov. 19, the government reinstituted those tariff reductions, to June 30, 1976, albeit on a shorter list of products. Among goods excluded from the original list were: plywood, furniture, white goods, house trailers, mobile homes and a number of food products, including lamb, pork and other meat products, and raisins and currants.

Also on Nov. 19, the Canadian Government permanently raised the duty-free tourist allowances for returning Canadians from $25 to $50 quarterly after a 48-hour absence and from $100 to $150 for the annual exemption after an absence of seven days (instead of the previously stipulated 12 days). This is an opportunity to sell more goods to the nine million Canadian travelers annually who spend one night or more in the United States.

In the broader scheme of tariffs and

non-tariff barriers, Canada is gearing up to play a positive active role in the GATT multilateral trade negotiations. The governmental Canadian Trade and Tariffs Committee is receiving briefs and conducting hearings. Canadian tariffs already are zero, low, remittable or subject to drawback on most production materials and machinery and equipment that must be imported.

Canadian tariffs on consumer goods and other finished products are high, however, clustering around 15 percent and occasionally reaching 25 or even 30 percent. In order to offer cuts in these tariffs the Canadian Government will have to overcome objections from a variety of sources, e.g., the electronics, textile, carpet, and furniture industries and the Canadian Manufacturers' Association.

Foreign capital requirements

A leading firm of Canadian investment brokers recently estimated that Canada will require $330 billion by 1980 for huge capital projects, and further, that five percent of capital needs will, as in the past, be supplied from foreign sources. Not long ago it was being argued that Canada no longer needed foreign capital to finance economic growth.

Regarding equity capital, the Canadian Government did not effectuate Phase II of the Foreign Investment Review Act (FIRA) by the end of 1974 as planned. Mellor thinks implementation is several months off. In order to ensure "significant benefits" to Canada, the Act established a screening procedure for the foreign takeover of existing Canadian firms (Phase I) and for the establishment of new foreign-controlled businesses in Canada (Phase II). To date, i.e., from April 1974, the Phase I operation under the Act has resulted in the rejection of nine out of 54 applications for approval of takeovers. Nine others were withdrawn and 36 approved.

France Reiterates Rules On Frozen Meat Imports

The French Ministry of Agriculture has reminded French importers that imported frozen animal products—including variety meats—must be properly stamped with their freezing date and accompanied by a certificate indicating they have been frozen and stored under specified conditions. This certificate is required in addition to the normal sanitary certificate. For details, see the decree of June 26, 1974 which was published in the *Journal Officiel* of July 31; a copy is available from the Western Europe Division, Bureau of International Commerce, U.S. Department of Commerce, Washington, D.C. 20230.

Inflation Hindering Efforts To Stem U.K. Economic Slide

Economic activity in the United Kingdom continues to decline and inflation is still accelerating.

Unemployment is rising and demand is weakening. Retail prices increased over 19 percent in 1974 while wholesale prices moved up by about 25 percent. Wages showed a 28 percent increase during the year.

This combination of reduced output and rising prices (along with limits on price rises because of a price code) has put great pressure on the financial position of the corporate sector. There are increasing reports of company financial difficulties, and several large companies (including British Leyland) have been forced to request government financial assistance.

The government moved to alleviate this problem in a November budget by relaxing the price code and reducing the tax burden on companies. The budget measures were also intended to spur output and reduce the growth of unemployment. However, in the long run, other elements of the budget may prove to weaken demand by further increasing prices, thereby reducing purchasing power. Included on this list is the proposal to raise nationalized industry prices to avoid losses and reduce government subsidies to those industries.

The government's strategy continues to be to induce the movement of resources into investment and exports in order that economic growth led by those two expenditure components can resume at a more acceptable and sustainable rate, without leading back into a spiral of inflation and balance of payments problems. To do this, it will be necessary to limit growth of domestic consumer demand and government expenditures. The difficulties in doing this are political and social: restraint of wages/earnings growth; restraint in social programs; restraint in other public expenditures such as defense.

All private forecasts of the U.K. economy are gloomy. None sees strength in any of the components of expenditure on output. Private consumption, which maintained its level in 1974, is foreseen falling in 1975, while surveys indicate sharp drops in manufacturing investment. Housing has been very weak, but may improve somewhat with falling interest rates and new government programs to spur housing starts. Government spending will grow only slowly as it is being constrained by a government seriously concerned about inflation. Exports, for which some strength had been foreseen in mid-1974, now do not appear to be buoyant because of the stagnation in other economies and because U.K. inflation rates exceed those of most U.K. trading partners. Monetary policy is still restrictive, though it seems to be loosening slowly.

There is unlikely to be much change in the British economic position through the middle of 1975. Output will continue to be depressed, reflecting the weakness of demand.

The major questions are the corporate financial position and wage growth. There is some question whether the budget measures taken in November to alleviate the squeeze on corporate finances are sufficient. If not, other companies will be forced to seek government assistance. Many will also have to shed labor more rapidly than otherwise.

Another budget is due soon. It may provide more funds to the corporate sector, if help is deemed necessary. The government may also endeavor to stimulate the economy at that time if inflation appears under control.

Much depends on the wage situation. If wage increases have moderated, either through an effective "Social Contract" or through other measures, then the government's hand is freer to use stronger stimulative measures. However, it will still be constrained by the size of the public sector borrowing requirement, and must avoid fueling inflation through the impact of public borrowing on growth of the money supply.

Investment must strengthen, and a key factor here is consumer and business confidence. The financial problems of companies pose a short-run impediment for hopes of increasing investment, but in the long run industry must also be confident of the future.

Prospects in key sectors

Some observations on U.S. sales prospects in several key sectors follow.

Petroleum and Offshore Equipment— Some 40 drilling rigs are presently in action and the first production platforms have been installed in BP's Forties Field. This has created strong demand for an enormous range of equipment, such as generators, pumps, motors, valves, compressors, safety equipment, communications equipment, barges and tenders, helicopters, and modules.

Electronics — In electronic consumer products, 1975 sales prospects are bad. Some segments of the very large U.K. electronics market offer good possibilities for growth, however. The Post Office Corporation's near-term purchases to improve telecommunications facilities are

expected to total at least $200 million and most business observers predict strong markets for radar, radio communications equipment and navigation aids. The total market for communications, including various types of equipment, likely will amount to about $770 million during 1975.

Computers—Sales of computer equipment will maintain their levels during the year, with minicomputers and data terminals leading the way. Additionally, there will probably be a significant market for the very large and expensive machines for use by local government units and agencies of the armed forces.

Automatic Business Equipment—There is a good market in 1975 as imports of cost-saving, technologically advanced equipment probably will rise by some 14 percent over the $400 million-plus level of 1974, despite poor business prospects in general.

General Aviation — Light aircraft and associated equipment is a growth market in the United Kingdom. Registrations and aircraft movements have increased by approximately 15 percent annually in recent years.

Consumer Goods — Some U.S. consumer goods should continue growth of sales in the U.K. market, despite the poor economic outlook. Opportunities appear to lie in the fields of do-it-yourself equipment, sporting equipment, lawn and garden equipment, toys and games, still cameras, musical instruments, phonograph records, many items of house and homewares, men's casual trousers including jeans, lingerie, women's undergarments, and women's casual wear.

Coal — The demand for coal (both coking and steam) far exceeds U.K. domestic production. U.S. coal producers should have opportunities to expand their coal sales to the United Kingdom during 1975.

Chemicals—Due to relatively low investment in new plant and equipment in past years by U.K. firms, U.S. sales of chemicals to the United Kingdom will probably grow in 1975.

Pumps, Valves, Compressors and Fluid Power Equipment — Demand prospects through 1975 remain favorable due primarily to increased demand from the oil and chemical industries, which consume 30 percent of total production. Fluid power orders, however, have declined from a peak reached in 1973, and this will probably continue through 1975.

Machine Tools—A general decline in sales is widely expected. There is little hope here for U.S. exporters in 1975.

Agricultural Equipment — The United Kingdom tentatively plans some major programs to expand and rationalize U.K. farm production. Good export opportunities for U.S. manufacturers appear to be in specialty equipment.

Aerospace—The British aerospace industry, the largest in Western Europe, represents an attractive long-term market for U.S. components, engines, avionics and subsystems and assemblies, as well as for complete aircraft. Market prospects were enhanced by the U.S. presence, for the first time, at the Farnborough Air Show in September. However, defense cutbacks, the depressed global air transport market, and uncertainty stemming from announced plans to nationalize airframe and missile companies, may make the market less buoyant this year, although some sectors such as general aviation aircraft may show modest growth.

Guatemala Does Well As Sugar, Oil Balance Out

Guatemala's $2.3 billion economy is in surprisingly good shape despite the fact that the country is 100 percent dependent on petroleum imports. This is welcome news to U.S. exporters, adds Emil Castro, Commercial Officer at the U.S. Embassy there, as the United States is Guatemala's leading supplier.

In 1974, the U.S. share of record Guatemalan imports increased to around 32 percent. Meanwhile, real GDP grew around 5 percent; this, while not bad by world standards, was substantially below the almost 8 percent growth rate attained in 1973. The outlook for 1975 is for an economic growth rate of about 3 to 3.5 percent and imports of $680 million. Guatemala's foreign exchange position at the end of 1974 continued strong, with reserves totaling over $200 million, thanks mainly to high world prices for sugar. The increase in earnings for sugar exports in 1974 over 1973 almost equalized the increased outflow for petroleum imports.

Shortly after Kjell Eugenio Laugerud assumed the Presidency of Guatemala in July, he announced an austerity policy toward government spending. This has had the effect of halting or slowing expenditures on major infrastructure programs. Nevertheless, one program that has been spared is the Chixoy Hydroelectric project of INDE (the National Electrification Institute). Current plans call for an investment of over $200 million to bring a first stage plant with a generating capacity of 230,000 KW into operation by 1981. Outlays in 1975 are budgeted at $2.3 million for construction of access roads. Preliminary engineering studies were carried out by an international consortium that included International Co., Inc. (U.S.) and Lahmeyer Int'l. GMBH (West German).

Chixoy is by far Guatemala's largest public works project. Financing will be provided by the World Bank, the Inter-American Development Bank, the Bank of Central American Economic Integration and the Venezuelan Government. U.S. firms interested in the Chixoy project are advised by Castro to have a local representative so as to receive a continuing flow of current information. In addition, such a step fulfills a Guatemalan requirement for foreign firms desiring to bid on government tenders.

Besides Chixoy, the most attractive public sector opportunities for U.S. exporters are in the supply of hospital and medical equipment to the Ministry of Public Health and the IGSS (Guatemalan Social Security Institute). Imports by these entities may be about $2 million in 1975.

All purchases of over $3,000 by a government entity must be made through public tenders.

Meanwhile, in the private sector the agricultural area continues to present attractive opportunities to U.S. suppliers. Although sales in 1975 to cotton growers will be off considerably because of low world prices for cotton, these lost exports should be offset by increased sales to other farmers. Reasons for this include high government priority for increasing production of basic grains, reflected in availability of low interest government loans for this purpose, and the excellent position of sugar growers.

The only dependable distribution channel for agricultural machinery and equipment is through Guatemalan importing distributors who in turn resell to end-users. These companies attempt to maintain adequate equipment inventories, as farmers tend to make spontaneous decisions as to when to buy a needed item. Immediate availability of that item is, therefore, a must for making the sale.

Another inviting sales area is for hotel equipment (linens, rugs, curtains, laundry and kitchen equipment, elevators and swimming pool accessories). Various hotel projects either in the construction or planning stage will add close to 1,000 hotel rooms by 1978; import costs are estimated at $2,500 per room. As U.S. or other international hotel groups are associated in these projects, purchasing decisions for imported components will generally be made abroad.

U.S. firms interested in the Guatemalan market but without local representation should be aware that Guatemalan firms show a preference for U.S. equipment because of past experience and the relative ease of obtaining needed spare parts due to proximity of the United States. In this regard, Guatemalan businessmen often take the two-hour plane ride to New Orleans or Miami in search of a needed part or to buy a new or used item. Thus, a sales outlet in either Miami or New Orleans can serve some U.S. firms as an indirect conduit to the market.

International Business Reports

Economic Report of the President. 359pp. $3.25.

Subjects discussed in this report, transmitted by the President to the Congress in February, include economic policy and outlook, economic developments and policy in 1974, unemployment, inflation during the past decade, government regulation, food and agriculture, and the international economy in 1974.

Write: Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

The International Implications of U.S. Antitrust Laws. Published by the National Association of Manufacturers. 16pp. $4.

At a time of increased world economic competition, marked by emerging natural resource cartels and trade with monopolistic state agencies, the subject of this study is a topic receiving renewed critical attention. The United States has the oldest, most vigorously enforced antitrust system in the world, according to the National Association of Manufacturers, which adds that it is also the only country placing significant antitrust restrictions on its firms operating in international competition. This NAM document analyzes the extra-territorial application of U.S. antitrust laws and attempts to show through case study examples that this practice inhibits American business competitiveness overseas. Problem areas discussed include joint venture formation, licensing arrangements, intra and inter-governmental policy conflicts and uncertainty problems brought on by current policy and enforcement procedures.

Write: National Association of Manufacturers, International Economic Affairs Department, 1776 F St. NW., Washington, D.C. 20006.

Economic Surveys for Italy and Norway. Published by the Organization for Economic Cooperation and Development. $1.75 each.

The study on Italy analyzes characteristics of the 1973-74 Italian recovery and the reversal of demand and output trends in the second half of 1974; examines short-term policies pursued since the beginning of 1973, and the recent change in demand management; examines recent developments and some structural aspects in the balance of payments, and attempts to identify causes of the recent poor export performance; deals with current forecasts for 1975; and presents conclusions.

The Norway study reviews major economic developments and attempts to show why Norway in a period of worldwide recessionary tendencies experienced an acceleration of growth; analyzes the longer-term behavior of prices and wages, as well as the role of economic policy in maintaining full employment and containing the danger of excessive price-wage increases; examines the outlook for policy in 1975; discusses the supply and demand forecast; and summarizes main conclusions.

Write: OECD Publications Center, Suite 1207, 1750 Penn. Ave., NW., Washington, D.C. 20006.

The Acquisition of Technology from Multinational Corporations by Developing Countries. By Walter A. Chudson and Louis T. Wells, Jr. Published by the United Nations Center for Economic and Social Information. $5, sales no. E.74.II.A.7.

Governments of developing countries, according to this study, are increasingly seeking to obtain a larger balance of social benefits over costs from foreign business participation. The authors review ways in which developing countries are moving toward this goal.

Write: Sales Section, United Nations, New York, N.Y. 10017.

Exporters' Encyclopedia—World Marketing Guide. Published by Dun & Bradstreet Int'l. 70th edition. 1,526pp.

Provides companies engaged in exporting with information on selling and shipping to more than 220 world markets. Some 1,200 pages in this international marketing service contain individual country market data, and the remainder present export know-how information, reference data, trade definitions and practices, communications and transportation services and international business information sources.

Coverage has been expanded on such marketing factors as product safety and testing requirements, advertising claims, product marketing and labeling, product packaging, pollution and ecology control measures, and consumer protection rules, as well as the areas of state trading, nationalization of procurement, and metric requirements.

Write: Exporters' Encyclopedia—World Marketing Guide, P.O. Box 3224, Church St. Station, New York, N.Y. 10008.

Calendar For World Traders

March 20—New York — Conference on the Trade Act of 1974, Implications and Impact. Speakers include Forest Abbuhl, Director of Commerce's Office of International Trade Policy. For information, New York Commerce District Office, 212-264-0621.

March 20—Richmond — Japan-Virginia Trade Symposium, John Marshall Hotel. Theme: Japan-Virginia Trade, Investment and Reverse Investment Opportunities.

March 25—New York — 58th Annual Conference of the International Executives Assn. Luncheon speaker: William J. Casey, Chairman, U.S. Export-Import Bank.

April 3—Memphis — Conference on Exporting: The Markets, The Means and The Meaning, College of Business Administration, Memphis State University.

April 7-8—New York — Conferences on International Money Management, and Transportation and Distribution in Latin America and the Caribbean, World Trade Institute.

April 8—New York—Briefings on Doing Business with the Arabian Gulf States, and Doing Business with Nigeria, American Management Assn. Speakers include Peter B. Hale, Acting Director, Commerce Action Group for the Near East, and Theodore F. Fiedler, Director of Commerce's Africa Division.

April 8—San Francisco—Seminar on Doing Business With the Major Oil Producing Countries of the Near East. Speaker: Murray Rennert, Director of Commerce's Office of Market Planning. For information, San Francisco Commerce District Office, 415-556-5860.

April 9-10—New York—Conference on Transportation and Distribution in Europe, World Trade Institute.

April 10-11—San Francisco, and May 8-9—New York—Program on Exporting: Governmental Assistance and Regulation, Practising Law Institute. Speakers include Rauer Meyer, Director of Commerce's Office of Export Administration. Write Richard Joannides, Practising Law Institute, 810 Seventh Ave., New York, N.Y. 10019.

April 16-17—Manhattan, Kansas—World Trade Conference, Kansas State University. Speakers include Edward J. Krause, Director of Commerce's Office of International Marketing.

April 17-27—Birmingham—Southeastern Trade Exposition, Birmingham-Jefferson Civic Center. Exhibition for the trade by 60 Brazilian manufacturers.

April 18—Houston—Houston World Trade Conference. Allen Lenz of Commerce's Bureau of East-West Trade will speak.

Worldwide Business Opportunities

International trade specialists in the Department of Commerce and Foreign Service Officers in the U.S. Embassies and Consulates around the world are continually developing specific commercial opportunities through which American companies can find buyers, agents, partners or investors abroad. One of the major means for communicating these opportunities promptly and accurately to the U.S. business community is through the columns of this magazine.

The section that follows presents details about licensing and joint venture proposals, opportunities to sell to foreign enterprises and appoint agents, and details on major construction and expansion projects.

Licensing, Investment Abroad

ARGENTINA — Seeks collaboration with U.S. firm to produce **fertilizers and industrial chemicals.** Interested in licensing technology, also joint venture agreements with or without capital investments. Established in January 1973, company mnaufactures sodium bicarbonate and is considering expansion into other countries. Has sales of $1.8 million annually. Augusto Gimenez Aubert, President, Carboquimica Argentina S.A., Carabelas 291, Buenos Aires, WTDR. P-75143.

MALAYSIA—Federal Industrial Development Authority (FIDA) has recently designated areas qualifying for locational tax incentives and revised list of priority industries and products. Combining locational incentive with other tax inducements an approved investor could be granted maximum tax relief of up to 10 years. FIDA's list of priority industries and products includes for first time the cultivation and processing of selected agricultural products. Copy of report is available from Foreign Investment Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-75146.

UNITED KINGDOM — Seeks licensing arrangement for manufacture of any **microscopes or laboratory instruments** within chemistry/pathological fields. Established in 1853. Manufactures, imports and markets microscopes, blood point counters, transformers, microscope parts and laboratory sample splitters. Current annual sales volume exceeds $500.000. G. Planer, James Swift & Son Ltd., Joule Road, Basingstoke, Hampshire, England. P-75170.

1099—RWANDA—Seeks joint venture partner to form a new **wolframite processing and marketing company.** Government of Rwanda would hold 49 percent ownership, foreign partner would own 49 percent, and 2 percent would be held by Rwanda National Bank. Initial production is planned to be 600 tons of tungsten per year, increasing to 1,000 tons annually. Inexpensive aluminum thermal process is proposed, requiring initial investment in plant and equipment of $125,000. Rwandan-Belgian interests will continue to mine the wolframite. Vervaet-Wilmart, Gaveresteenweg 431, 9220 Merelkebe. Phone: 091/30.62.17. P-75144. OPIC.

1411, 1423—SAUDI ARABIA—Wishes to collaborate with U.S. firm to **carry out survey for quarrying and granite mining** in Western Zone of Saudi Arabia. U.S. firm should provide engineers, skilled manpower, machinery and equipment, Saudi company will provide administrative facilities, labor and local assistance. Firm currently engaged in shipping, contracting, real estate and importing building materials. Employs 25, has annual sales over $10 million. Mahmooe Nashar, Nashar Trading Co., P.O. Box 79, Jidda. Cable: NASHAR, JIDDA; phone, 23600. P-75147.

2000—SWITZERLAND — Manufacturer of dairy products wishes to diversify. Licenses are sought for food products in following: **ready mixes for household and commercial use; additives and substitutes for manufacturers of cookies, chocolate, candies in powder form; novel types of milk drinks (e.g., shakes); low-calory foods; snacks.** Firm is located in modern, well-equipped, highly automated plant. Staff, 20 persons. Foreign Investment Services Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-75153.

2013—PHILIPPINES — Firm seeks joint venture or licensing arrangement for manufacture of **processed meat products.** Principal products to be produced are ham, frankfurters, bacon and sausages, vienna sausages, luncheon meat and corned beef. Total cost to start is estimated at $2.1 million. Foreign Investment Services Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-75151. OPIC.

2075—SAUDI ARABIA—Firm seeks joint venture to establish **soybean processing plant** to produce oil and meal. Plant would initially rely on imported soybeans. Operation's size has not been determined. Established in 1961, firm is importer and wholesaler of various farm machinery and equipment and chemicals. Foreign Investment Services Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-75160.

2099—JAPAN—Prominent candy manufacturer seeks an exclusive license to produce **potato and corn chips.** Established in 1949, firm has 500 employees and 1974 sales of $20 million. Its products are distributed through department stores, supermarkets and wholesalers. Foreign Investment Services Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-75142.

2591—CANADA—Firm seeks licensing or joint venture arrangement to manufacture **window shades.** Products currently produced are draperies, curtains and bedspreads. Established in 1972, company has 45 employees, including 8 salesmen. Manny Bloom, Secretary/Treasurer, Bonavista Fabrics Ltd., 7230 Alexandra St., Montreal, P.Q. WTDR. P-75171.

2661—GERMANY—Seeks license to manufacture **novel types of building board.** Firm presently makes thermal sandwich board, wants to expand its product line. Employs 20, has good credit rating. Heinz Schlingmeier, Nordwestdeutsche Leichtbaustoffindustrie, 4517 Hilter a.T.W. 1. P-75145.

2865, 2869—INDIA — Firm seeks licensing arrangement with U.S. collaborator willing to supply technical and process know-how for manufacture of **polymers, homopolymers and copolymers.** Firm also desires to purchase equipment (primarily multipurpose reactors for polymerization of monomers, such as vinyl acetate, styrene, methyl, ethyl, butyl, 2-ethyl hexyl acrylates). Annual production of 3,000 tons of polymers, homopolymers and copolymers is projected. Estimated cost of project is $2 million. Write: Foreign Investment Services Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-75138. OPIC.

2865—KOREA—Seeks 50-50 joint venture agreement to manufacture **top quality organic and inorganic pigments** including Azo Group, Lake Group and Phthalo-Cyanine blue and green. Firm is reportedly Korea's leading manufacturer of 200 items of industrial pigments and raw materials, wishes to upgrade quality and develop new products. Partner will be expected to provide $3 million worth of cash investment, technical know-how and supplies of raw material. In-Shik Choi, Man-Shik, Director, Dai Han Color Ind. Co., Ltd., P.O. Box 31 Pusan, 105-13, Yeunsan-Dong, Tongnae-Ku, Pusan 601-02. Phone: 53-0651-3. P-75148. OPIC.

3079 — AUSTRALIA — Firm desirous of entering into licensing agreement with U.S. company for manufacturing **bean chairs.** Company has been in furniture manufacturing business for 15 years. R. L. Ashley, Managing Director, C.I.M. Pty., Ltd., 14 Wallace St., Greenwich, N.S.W. 206. P-75174.

3241—SENEGAL — Consulting engineer is seeking contacts with American firm able to supply him with turnkey proposal to develop **cement plant** with annual capacity of 500 000 metric tons. Know-how and equity participation in proposed plant, estimated to cost $40 million, are also sought. Location would be in Dakar tax and duty free industrial zone which would allow profits and capital to be freely transferred. Masissa Seye Tall, Senegalese Consulting Engineer, BP 2428, Dakar. P-75162. OPIC.

3272—IRAN—Seeks licensing or joint venture agreement for system to produce **prefabricated concrete structures (houses, apartments, farm buildings)** including door and window frames, prefab bathrooms. Firm has $3 million capital for the venture and may seeks participation from Government of Iran or foreign private investors. Foreign Investment Services Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-75140. WTDR. OPIC.

3292—UNITED ARAB EMIRATES—Well connected businessman is looking for American firm willing to join in a 50-50 partnership for establishment of **cement products firm.** Land, cement required; 50 percent capital needed for venture would be supplied by Said Al-Soueidy and it is proposed that U.S. partner supply technical know-how, sales management and remaining 50 percent of required capital. Equipment could be substituted for capital contribution. Al-Soueidy is currently employed by Ministry of Information and is a partner in the Arabian Gulf Co. as well as several other firms. Said Al-Soueidy, c/o Arabian Gulf Co., P.O. Box 914, Abu Dhabi. WTDR. P-75163.

3296—SPAIN — Manufacturer of fiberglass **boats and industrial products** is seeking licenses and/or joint ventures with American glass fiber firms as well as producers of polyester resins to make their products in Spain. Presently produces recreational boats, lifeboats, and various industrial pieces, such as frameworks for refrigeration towers, roofs for automobiles, consoles, street lighting poles. Company has two plants; employs 220,

and has 28 outlets throughout Spain. Foreign Investment Services Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. P-75164. WTDR.

3312—BRAZIL — Successful medium-sized distributor for Brazil's leading steel mills, and its sister company which cuts and processes steel plate, seek joint venture agreement with U.S. company able to help reorganize and complement their present structure and scope to establish **steel service center** based on U.S. models. Ample American participation in stock control and management would be welcome. Max Otto Buess, President, COFERMETAL Ind. e Com. de Ferros e Metais S.A., Rua Taquaritinga 170, 03170 Sao Paulo (SP). WTDR. P-75165. OPIC.

3312—MEXICO—New Mexican concern is interested in entering into joint venture with U.S. investor for **production of steel for construction industry.** Firm will manufacture and distribute reinforcing bars, angle bars, round bars, flats and shapes as well as special steel items for use in construction. Mill is scheduled to begin production in April and will employ 250-300 workers. Scrap and other needed raw materials available. Plant's production capacity is 72-90 metric tons per annum. Steel mill is located on its own land which is fully paid for. Installation and all machinery are also paid in full. Sr. Kreimerman, Aptdo. Postal 7, Santa Clara. Edo. de Mexico. Phone, 569-13-70. P-75157. WTDR.

3312, 3443, 3536—UNITED KINGDOM—Old established company providing engineering services—e.g., for shipbuilders, chemical and industrial plants, generating stations—seeks licensing agreement preferably in heavy engineering or with possible North Sea Oil implications. Products of interest would include **pressure vessels, steel rolling mills, water and sewage treatment plants, boilers, modules, buoys, cranes and oil loading arms.** Company's works are geared to heavy precision engineering with farbication shop capable of handling material up to 160 long tons in weight. Employs 480. Andrew P. C. Thomson, Managing Director, Alexander Stephen Engineering Ltd., Linthouse, Glasgow GS14RF, Scotland P-75159.

3469, 3479 — GERMANY — Established metalworking firm is seeking collaboration with U.S. capital goods firms for **fabrication or surface of items used in consumer goods industries** such as electric spin dryers, electric radiators, high speed heaters, convectors, wheelbarrows and steel frames for furniture industry. Similar metalworking processes are also available for conveyor and processing systems used by ceramic, rubber and chemical industries. Company employs 750 with annual sales of about $30 million and has excellent marketing connections throughout Germany Ms. Doris Atkind, Trade Promotion, European-American Banking Corp., European-American Bank & Trust Co., 10 Hanover Square, New York 10005. Phone, 212-623-3600. P-75156.

3494—ARGENTINA—Fast growing medium-sized company presently selling technology and equipment for natural and bottled gas industry seeks joint venture agreement for manufacture of **gas pressure reducing valves of all sizes.** Engineer Jose Tribuzio, President, ETIM, S.A., H. Yrigoyen 1116, Buenos Aires. WTDR. P-75175.

3500—FRANCE—Seeks license, technology to manufacture **fish processing, packing and packaging machinery.** Interested in producing equipment in France, market in Soviet Union. Could include turnkey operation. French firm has been active as export/import agent in variety of products including machine tools, chemical and food processing equipment. Has representative in Moscow. Bernard Mulot, President, SONOCOM, 28, avenue de l'Opera, Paris. WTDR. P-75139.

Licensing and investment proposals from foreign firms are listed in these columns. Specific product interests in each proposal are highlighted in bold type to facilitate identification and each proposal is preceded by the appropriate four-digit product number taken from the Standard Industrial Classification (SIC) Manual.

Background information on opportunities abroad and assistance on overseas investments are available from the Foreign Investment Services Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. "P" numbers should be used when responding to any of the specific proposals listed.

WTDR indicates that a World Traders Data Report containing financial and background information on the foreign firm is available for $15 from the Export Information Division, Room 1313, U.S. Department of Commerce, Washington, D.C. 20230, or from any Commerce District Office.

OPIC indicates that the country involved is eligible for investment insurance coverage and financing from the Overseas Private Investment Corporation. Information regarding applicable coverage may be obtained from OPIC, Washington, D.C. 20527.

3523—UNITED KINGDOM—Seeks license to produce **agricultural trailers and farm machinery.** Also wants to produce **municipal refuse disposal equipment and products for offshore oil industry.** Company makes trailers, engages in general fabrication work. Wants to diversify. Operates modern factory equipped with 4- to 5-ton cranes, automatic arc beam welding and shot blasting facilities. B. Field, Managing Director, M & G Trailers (Lye) Ltd., Hayes Lane, Lye, Stourbridge DY9 8PA, England. P-75158.

3530—JAPAN — Seeks exclusive licensing **agreement to manufacture fully integrated systems of automated plant and warehouse materials handling equipment.** Firm currently makes cranes; plans to expand production facilities by installing necessary machinery purchased in U.S. Initially, it wants to buy material handling systems for trial runs. Company employs 650, has branch offices in several major cities; is also sales agent for a major Japanese manufacturer of heavy electrical equipment. Yuko Tsuchiyama, Chief, Control Equipment Section, Machinery Division, Tachibana Shokai K.K., 47 Awaboridori 2-chome, Nishi ku, Osaka 550. Phone: Osaka 06-541-9521. P-75141.

3559—GERMANY—Seeks licenses to produce **continuous process mixing, kneading, portioning and packaging machinery for viscous and gluey materials.** Equipment would be sold to chemical, paint, rubber, food, pharmaceutical industries. Newly established firm produces mixers and machine tools; employs 20. Klaus Winkler. Managing Partner, Bramscher Maschinenfabrik GmbH., Am Kanal, 455 Bramsche. P-75137.

3563, 3561—DENMARK — Medium-sized manufacturer of high-quality iron castings and building castings, central heating boilers, parallel vices and equipment for institutional kitchens, seeks licensing agreement to manufacture **compressors and pumps.** Interested in establishing contacts with company which has manufacturing program of air compressors for traditional applications, such as building industry, machinery industry. Compressors should have capacity ranging from 3 to 100 atmospheres. Among types of pumps are drain pumps, water work pumps. Firm, established in 1847, employs 200. Foreign Investment Services Staff, Room 4021, U.S. Department of Commerce, Washington, D.C. 20230. WTDR. P-75176.

3569—GERMANY—Seeks license to manufacture **garbage disposal units including shredders, compactors and incinerators.** Also wants to produce conveyor belts and bucket conveyors used in connection with such equipment. German concern is also interested in licensing its heavy duty shredders and incinerating equipment in U.S. Company employs around 50, is building new manufacturing facility. Guenther Steumpel, Manager, Osnabruecker Metallwerke J. Kampschulte & Co., Bramscher Str. 119, Postfach 3362, 45 Osnabrueck. P-75152.

3573—MEXICO—Seeks license to manufacture **computers using printed circuit boards.** Needs technical know-how, installation of equipment. Firm presently manufactures computers, employs 320. Guiseppe Marelli, Digita Victor, Avenida De Los Cien Metros 605, Mexico 14, D.F. (Col. Vallejo). Phone (direct dial from U.S.), 905-586-3066. WTDR. P-75161.

3585—ISRAEL—Seeks license to produce **solar collectors.** Also interested in distribution and/or license to produce **absorption refrigeration and air conditioning systems.** Interested in fractionally to multiple tonnage units for commercial solar energy system applications. Firm is leading manufacturer, importer and exporter of air conditioners, elevators, escalators and TV sets. Employs about 1,200, represents major American company. G. Carmel, Assistant Managing Director, Electra (Israel) Ltd., 19 Petah Tikva Road, P.O. Box 2180, Tel Aviv. P-75150. OPIC.

3585—LEBANON—Seeks license to assemble **residential air conditioning equipment.** Interested in 3 to 100-ton air cooled units for installation in apartments and large buildings. Market in Middle East. Firm presently distributes air conditioning equipment; plans to establish medium-size assembly plant. Henry Salha, Manager, CONDAIR, Union de Paris Bldg., Rome St., P.O. Box 4736. Beirut. Cable: HENSALAS. WTDR. P-75169.

3589—SWITZERLAND — Seeks license to produce in France and Switzerland: **electric (200 v., 50 c.) and pneumatic garbage compactors for household and commercial use; small and medium electric garbage and waste shredders; and household and commercial water treatment and decontaminating units for drinking water supplies.** Firm presently specializes in manufacture of precision machine tools and screw machine parts. Its plants are equipped with modern metalworking machinery. Roger Maurer, President, Etablissements Maurer, Poste Restante, 1200 Geneva. P-75172.

3621—UNITED KINGDOM—Seeks license to produce **fractional horsepower a.c. and d c. motors, small fans and similar products.** Firm manufactures rotary transformers, power resistors and voltage stabilizers; employs 260. A. C. Emerson, Director, Berco Controls Ltd., Heath Works, Baldock Road, Royston, Herts, SG8 5BQ, England. Phone, Royston 42424. P-75149.

3751—BOTSWANA — Botswana Development Corp. Ltd. is seeking potential investors toward establishing **bicycle plant** in Botswana. Plant would be in Pilane Industrial Site, some 20 miles north of Gaborone. Estimated market potential is quite high.

Current annual demand runs between 5,000 and 15,000 units. Prospects exist for exporting bicycles to Malawi, Zambia and other neighboring countries. Botswana Development Corp., established in 1970, promotes industrial and commercial concerns in Botswana. It has been involved in projects such as property development, tourism, transportation. Additional information available from Botswana Development Corp., P.O. Box 438, Gaborone. Telex, 413 BD; cable, DEVELOP. P-75168, OPIC.

3811, 3829—GERMANY—Established German firm currently manufacturing digital blood pressure measuring systems, is seeking license for manufacture of **medical electronic equipment, medical measuring equipment with computerization potential and equipment for routine detection of malignant growths** through automated cell analysis. Firm is also willing to consider being agent for such equipment and is willing to cooperate with American firm in development of new concepts for these items. Dr. Geyer, Medicotec GmbH, 1 Berlin 15 Olivaerplatz 16. WTDR. P-75167.

3841—UNITED KINGDOM—Scottish Tayside Development Authority is seeking licensing or joint venture agreements with U.S. firms for manufacture of advanced **medical instruments and equipment.** Tayside Authority is local government-sponsored, regional group devoted to economic and industrial development of that area of Scotland. Harvey Mitchell, Tayside Development Officer, Tayside Development Authority, Medical Instrumentation & Equipment, 15 Albert Square, Dundee DD1 1DJ Scotland. P-75166.

3841—SWITZERLAND — Seeks distributorship, and possibly license or joint venture to manufacture **radio immuno assay materials and instruments; radio-isotopes, tagged or non-tagged; hormones, human and animal; endocrines; materials for drug detection; second antibodies; equipment and systems for immunochemical processes and radio-chemical assays.** Established in 1971, firm employs 7, has Switzerland and Yugoslavia as its sales territory. J. Mullener, President, Mullener, Geratebau AG, 8905 Arni. —P-75154.

3873—UNITED KINGDOM—Seeks license to manufacture **advanced computer or communication systems.** Presently produces and markets computer systems and software, data and telecommunications systems. Employs 360, represents two American companies. Leonard A. Taylor, Managing Director, Logica Ltd., 64 Newman St., London W1P 3PG WTDR. P-75155.

3911—MEXICO—Manufacturer of silver gift items and silver solder, desires joint venture/licensing agreement with American firm. Product to be manufactured by new enterprise would be **metal gift items and solder.** U.S. firm's participation would be in form of technical know-how and patent/trademark. Mexican firm, established in 1957, employs 28 persons. Albert L. Limenes, Director, Plat Mex, S.A., Calle Rosas Moreno 68, Mexico 4, D.F. WTDR. P-75173.

Licensing In U.S.

For additional information on these opportunities to manufacture foreign firms' products in the United States under a licensing agreement or in partnership, write the Investment Services Staff, Bureau of International Commerce, Room 4020, U.S. Department of Commerce, Washington, D.C. 20230 (202-967-2248) referring to appropriate file number.

AUSTRALIA—License for manufacture in U.S. of **straddle container carrier** is offered by Australian firm. Carrier is designed to travel over a three-high container stack when empty, to transport containers of up to 40 feet in length by means of automatic telescopic spreader, and to handle containers with oversize loads protruding above container top. File 2683

GERMANY—Licenses to produce **shield pistons and oil-water emulsions** for diesel engines in U.S. are offered by German firm. Both processes are designed to reduce oil consumption significantly. File 2684

GERMANY—Manufacturer wishes to license production in U.S. of its **automatic hog feeding equipment,** which ranges from exterior silos to conveyor-loaded feed bins of varying capacities. File 2685

GERMANY—Company seeks U.S. licensees to manufacture **air-supported structures** for industrial, commercial, and institutional use. Made of PVC-coated synthetic fiber-fabric resistant to rotting and tearing, these structures cover 2,000 to 60,000 sq. ft. of floor space. File 2686

GERMANY—Complete new **overhead conveyor system** is offered for manufacture under license in U.S. by German firm. System features suspended hangers for items light enough to be moved manually. File 2687

GERMANY—A leading German manufacturer of **hydraulic presses and pressing plants** for rubber, plastics, metalworking, and wood industries seeks U.S. licensee to produce this type of equipment. Line includes short-cycle laminating plants, modern hydraulic single-column presses, solid hot plates. File 2688

GERMANY—Company wishes to license production in U.S. of its **refuse shredders and incinerating equipment.** Heavy-duty shredder is capable of reducing refuse to about one-fifth of its original volume and of handling bulky containers such as barrels. Units can be designed for stationary or mobile use by industries, institutions, and municipalities. File 2689

SWEDEN—U.S. licensee is sought by Swedish firm for manufacture of **electro-hydraulic crane.** Compact (all-enclosed, hoseless hydraulic system), lightweight (about 100 kg.), and suitable for mounting on small trucks, crane has lifting capacity of up to 1,500 kg. File 2690

SWEDEN—Manufacturer of **gas- and oil-fired steam boilers** with a capacity of 1,000-60,000 lbs. of steam per hour, waste heat boilers for diesel engines and gas turbines, and oil preheaters, wishes to license production of this equipment in U.S. These heat exchangers, used the world over in marine and stationary plants, are known for their high tube heat absorption capacity. File 2691

SWITZERLAND—Microfilm mail parcel registration system is offered for manufacture under license in U.S. by Swiss firm. System is designed for use by postal services, banks, insurance companies, mail order houses, and organization mail rooms. It has been adopted by Swiss Postal Service and numerous commercial enterprises throughout Europe. File 2692

SWITZERLAND—Distributor wishes to license production in U.S. of **novel safety lock.** Reportedly pickproof, lock is low-cost cylinder consisting of small plates providing millions of key combinations. It is designed for use in homes, automobiles, offices. File 2693

SWITZERLAND—Company specializing in development of computer software and writing of EDP programs for management of large construction projects and physical planning of urban centers or regions seeks U.S. licensee to produce this **software.** Company recently has administered multimillion dollar construction projects involving colleges, hospitals, shopping malls, and urban centers. File 2694

SWITZERLAND—Two lines of **safety cylinder locks** are offered for licensed manufacture in U.S. by Switzerland's leading producer of mechanical safety locks. Operation of locks is based on sprung pin/tumbler principle but offers unusually high number of combinations and applications. Locks are made of a special alloy that is highly resistant to drilling and other forms of breakage. File 2695

SWITZERLAND—Firm offers for production in U.S. its **acrylic-based mat aerosol lacquers,** used primarily for decorating automobiles and shop windows. The lacquers do not harm original finishes or require preliminary surface treatment, and can be washed off at any time with a special liquid. File 2696

UNITED KINGDOM—Mobile cattle grid is offered for licensed manufacture in U.S. by British firm. For use in gateways over 8 ft. wide, grid can be hauled by tractor from site to site and installed easily by one man. It can be crossed by most vehicles ranging from small cars to large trucks. File 2697

YUGOSLAVIA—One of largest Yugoslav manufacturers of industrial electrical equipment and household appliances wishes to license production in United States of **three-leg, frame-type cores for large transformers and reactors.** Cores feature low magnetic losses and simply shaped laminations making possible minimum cutting waste. File 2698

YUGOSLAVIA—Licenses to manufacture **automated system for protection against earth fault and short circuit** in electrical networks are being offered by a Yugoslav enterprise. System includes main transformer, distribution branch, and motor branch units and can cut off a broken section of network automatically without use of fuses. File 2699

YUGOSLAVIA—U.S. licensee to produce **Perchlormethylmercaptan,** an intermediate chemical used in production of fungicides, is sought by a well-known Yugoslav chemical and pharmaceutical firm. This chemical is made under a new technique, based on application of cheaper catalyst and of oxidizing agents for purification of technical products. New process results in very pure end product and can be carried out in the same type of apparatus used in earlier methods of catalyst introduction. File 2700

YUGOSLAVIA—One of Yugoslavia's major scientific research institutes offers to license manufacture in U.S. of its **automatically controlled stage lighting system.** Designed for use in theaters, operas, TV studios, sports centers, and auditoriums, system consists of control desk, card puncher, optical mark reader, thyristor units, and main distribution poser. File 2701

GERMANY—Manufacturer of steel, alloy steel, and stainless steel long and short **radius elbows** wishes to establish joint venture with U.S. firm in steel fabricating industry. File 2702

GERMANY—U.S. manufacturers of **industrial electrically heated baking and annealing ovens** are sought by German firm for joint venture arrangements. German company provides nearly all smaller ovens used in schools and other educational and training institutes in Germany, and smaller share of industrial ovens. File 2703

SWITZERLAND—Small, highly specialized Swiss manufacturer of machinery for plastics and chemicals industries offers license for production of **mold clamping machine** for electrical insulators made from mixture of epoxy resins and quartz sand. Chief advantage of these insulators is their high resistance to shock and breakage. Machines of this type are already being used by two U.S. manufacturers of electrical appliances and equipment. File 2600-R

Foreign Trade Inquiries

These trade opportunities are based on reports received from the U.S. Foreign Service—Department of State by the Trade Opportunities Division, Room 2323, U.S. Department of Commerce, Washington, D.C. 20230. The commodities in which foreign firms have interest are indicated by the five-digit numbers and commodity classifications which are from the Standard Industrial Classification (SIC) Manual and the Numerical List of Manufactured Products, 1972 Census of Manufactures.

U.S. firms should be aware that the listing in Commerce Today *of opportunities to trade in specific commodities and technical data does not necessarily imply approval of their export by the Department of Commerce pursuant to the Export Administration Act of 1969. Applicable export licensing regulations must be followed.*

Every effort is made to include only traders with good reputations. However, the Department cannot be responsible for any trade relations.

WTDR indicates that a World Traders Data Report on this specific firm is available at $15 from the Export Information Division, Room 1313, U.S. Department of Commerce, Washington, D.C. 20230. A WTDR is a trade profile which contains commercial information including financial references, on an individual foreign firm. Orders must include complete name and address of the subject firm and be accompanied by payment. Further information concerning WTDRs and request forms are available at each Commerce District Office.

The mark (•) indicates that this trade opportunity is a request for bids by a foreign government agency.

Direct Sales

Highway & street construction

• **16100—LIBERIA**—Tender for construction and improvement of United Nations Drive, a multi-lane thoroughfare. No cost estimate available. Part of a five-year program of highway improvement financed by Liberia and the World Bank. Ministry of Public Works will receive applications for prequalification of contractors for bidding. Latest date for submittal of prequalification documents is April 1. Prequalification questionnaires may be obtained from Gabriel J. Tucker, Minister, Ministry of Public Works, Monrovia; G. G. Thomopulos, Stanley Consultants, Ltd., P.O. Box 444, Monrovia; or R. E. Lassell, Stanley Consultants, Inc., Stanley Bldg., Muscatine, Iowa 52761. Bid deadline Oct. 1. Copies of a transmittal from the American Embassy in Monrovia which provides data on various aspects of the project are available from Construction and Building Materials Program, Room 2118, U.S. Dept. of Commerce, Washington, D.C. 20230 (202-967-3602), and the Commerce District Office, Federal Bldg., 450 Golden Gate Ave., P.O. Box 36013, San Francisco, Calif. 94102 (415-556-5860).

• **16100—TUNISIA**—Call for firms to register to tender for project involving construction of one-fourth of the new Tunis-Hammamet four-lane highway (Section Oued Milliane—Turki). Work to be completed in two years beginning in October. Prequalification documentation, in French, should include: intention to bid, status of the firm and volume of business during past five years, references from similar projects completed, list of equipment, and list of technical personnel with indication of diplomas, years of experience, and years employed by firm. Project is financed by World Bank loan. Director of Roads and Bridges will advise qualified firms on how to obtain tender documents and specifications. Write: Monsieur le Directeur des Ponts et Chaussees, Cite Jardins, Tunis. Firms wishing to prequalify must notify before April 30.

Heavy construction, except highway and street construction

• **16200—DOMINICAN REPUBLIC**—Tender for construction of first phase of Yaque del Norte Irrigation Project. Headworks is located in city of Santiago and irrigated area extends down the valley from Santiago towards Montechristi. First phase will be executed by means of two general contracts. Tenders for first contract will be invited in near future; the second, six months later. Joint venture with Dominican participation desirable. Financing by World Bank (IDA) and Inter-American Development Bank loans. Interested firms should apply for prequalification forms by registered mail to Ing. Michel Lulo Gitte, Director Ejecutivo, Instituto Nacional de Recursos Hidraulicos, Centro de los Heroes, Santo Domingo. Completed forms must be received no later than April 30. All forms are in Spanish. Copies of a notice on this project providing additional details prepared by the American Embassy in Santo Domingo are available from the Construction and Building Materials Program, Room 2118, U.S. Dept. of Commerce, Washington, D.C. 20230 (telephone: 202-967-3602), and the U.S. Dept. of Commerce District Office, Federal Building, 450 Golden Gate Ave., P.O. Box 36013, San Francisco, Calif. 94102 (telephone: 415-556-5860).

• **16200—LIBERIA**—Tender for construction of Johnson St. Bridge, consisting of two-lane post-tensioned concrete box girder 14 meters wide and 427 meters long, having three interior spans of 107 meters and end spans of 53.5 meters. A double cantilever method is proposed for the super-structure construction. No cost estimate available. Part of a five-year program of highway improvement financed by Liberia and the World Bank. The Ministry of Public Works will receive applications for prequalification of contractors for bidding. Latest date for submittal of prequalification documents is May 1. Prequalification questionnaires may be obtained from Gabriel J. Tucker, Minister, Ministry of Public Works, Monrovia; G. G. Thomopulos, Stanley Consultants, Ltd., P.O. Box 444, Monrovia; or R. E. Lassell, Stanley Consultants, Inc., Stanley Bldg., Muscatine, Iowa 52761. Bid deadline Nov. 1. Copies of a transmittal from the American Embassy in Monrovia which provides data on various aspects of the project available from Construction and Building Materials Program, Room 2118, U.S. Dept. of Commerce, Washington, D.C. 20230 (202-967-3602), and the Commerce District Office, Federal Bldg., 450 Golden Gate Ave., P.O. Box 36013, San Francisco, Calif. 94102 (415-556-5860).

• **16200, 34300, 35600, and 36100—SINGAPORE**—The Senior Executive Engineer, Sewerage Dept., Ministry of the Environment, 9th Floor, National Development Bldg., Maxwell Road, Singapore 2, invites tenders for supply, erection and testing of main sewage pumps and motors, sump pumps and sump level indicators, reflux valves, gate valves, double girder crade hoist, switchboard and alarm panels, push button stations, compressors, and related equipment for two pumping stations. Included in contract is modification to existing 400V switchboard. Tender number is TEN(ENV) 07/WB/74/27. Work covered by this tender may be eligible for payment in part from a World Bank loan. Persons or companies which are not registered as Public Works Department contractors will be permitted to tender as "Specially Registered Contractors" within two weeks of invitation to tender. For Public Works Department registered contractors, tender is restricted to all contractors in mechanical engineering above S$250,000. To become a "Specially Registered Contractor," a tenderer is required to submit brief details of experience and qualifications to show that similar work has been successfully completed before tender is submitted. To obtain tender documents. a "Specially Registered Contractor" must deposit a sum of S$500 with the Public Works Department, 10th Floor, National Development Bldg., Singapore 2. The deposit will be returned within 14 days after tenders opened to all tenderers who have submitted a bonafide tender. "Specially Registered Contractors" shall supply a "tender bond deposit" with tender, which is one percent of tendered amount.

Fats & oils

2077311—ITALY—Neat's foot oil, 100 m/t annually. A.L.P.A. is medium sized mfr. & rep. of chemical products. Sales territory covers all of Italy. Firm enjoys good reputation. Contact Buyer—Franco Nava, Mgr., A.L.P.A. Azienda Lavorazione Prodotti Ausiliari, 20017 Castellazzo di Rho (Milano). Tel. 02/9306477.

Broad woven fabric mills, wool

22312XX—GERMANY — Women's & children's clothing—less than 9 oz., worsted, 100% wool, incl. blends, chiefly wool; less than 9 oz., woolen, 100% wool; less than 9 oz., woolen, blends, chiefly wool; 9 oz. to 13 oz., worsted, 100% wool, incl. blends, chiefly wool; 13 oz. up to 16 oz., worsted; 16 oz. up to 20 oz. worsted; 20 oz. and over, 100% wool; 20 oz. & over, blends, chiefly wool. Branch of Mitsubishi Corp., head office Tokyo. Hamburg office has 100 employees. Financial condition sound. Dir. sale & agency. Reply to—Mr. Roger Rischke, Mitsubishi International Gmbh, 2 Hamburg 76, Hamburger Strasse 11. Cable Mitsubishi Hamburg; tel. 040 22 93 41.

Furniture, fixtures

2591252 — GERMANY — Venetian blinds, aluminum-slat blinds. Founded 1927. Annual sales over DM 13 million. 4 employees. Dir. sale & agency. Reply to—Herr Mirabella, Karl Wehrmann, 2 Hamburg 1, Spaldingstrasse 74. Tel. 040 242475.

Converted paper, paperboard products

2648111—AUSTRALIA—Fancy gift stationery in compendiums, plastic wallets, & fancy

boxes containing paper & tissue lined envelopes. To be similar to that made by Montage of Atlanta. Old estab. co., covers Australia. WTDR 9/74. Reply to—Herbert Blum, Mgr., Stationery Div., R. Gunz (Photographic) Pty. Ltd., 63 Ann St., Darlinghurst, NSW 2010. Cable: Gunzkompany; tel. 2113155.

Industrial chemicals

• **28100—REPUBLIC OF VIETNAM**—200 metric tons sodium fluoride and 150 metric tons sodium silicofluoride. Sodium fluoride should be fine, dry powder with minimum of 42.9 percent fluorine and maximum of 0.04 percent lead (Pb), 0.6 percent insoluble matter, and 0.5 percent moisture. Sodium silicofluoride should be white or yellowish-white, nonhydroscopic, dry granular or crystalline powder containing minimum of 98 percent sodium silicofluoride and maximum of 0.05 percent lead (Pb), 0.5 percent insoluble matter, no water or crystallization, and 0.5 percent moisture. Both shall be packed in 100-pound multiwall paper bags and shipped in wooden containers. Financing by AID/CIP. Invitation No. 0014/7502/AID/CIP. Bid deadline April 18. Submit bids to Mr. Nguyen Huu Tuan, Director, Saigon Metropolitan Water Office (SMWO), 86 Nguyen Thong St., P.O. Box M-18, Saigon. Tender documents available from Chemicals and Rubber Program, Materials Division, OBRA/BDC, Room 2128-A, Department of Commerce, Washington, D.C. 20230.

Steel mill products

• **33100—PAKISTAN**—10,000 feet seamless steel line pipe, various sizes. Tender No. SN-3158/75; bid deadline April 14. Sui Northern Gas Pipelines, P.O. Box 56, Monnoo House, 3 Montgomery Rd., Lahore. Tender documents available from Overseas Products Sales, U.S. Department of Commerce, Washington, D.C. 20230, 202-967-4523.

• **33100—BURMA**—90 mt. galvanized corrugated iron sheet; 40 coils galvanized stranded wire; 2,400 ft. hot finished seamless steel water well casing; various sizes and quantities of welded pipe. Tender No. 2(T) ARCP/IDA(74-75); bid deadline April 11. Agriculture Corporation, 74 Shwedagon Pagoda Rd., Rangoon. Specifications available from American Embassy, Rangoon, at $3 per set, or from Iron and Steel Program, BDC, U.S. Department of Commerce, Washington, D.C. 20230 (202-967-2438).

• **33100—INDIA**—Mild steel plates conforming to specifications IS:226/69-ST42S or equivalent. Tender No. 1 of 1975; bid deadline April 3. Sail International Ltd., Hindustan Times House, 1820 Kasturba Gandhi Marg, New Delhi 110001. Tender documents available at above address.

• **33100 — IRAN** — 130,000 mt. standard heavy rails. Tender No. 371/62; bid deadline April 8. Iranian State Railways, Tehran. Specifications available from Iron and Steel Program, BDC, U.S. Department of Commerce, Washington, D.C. 20230 (202-967-2438).

• **33100 — PAKISTAN** — Various sizes and quantities of cast iron pressure pipes along with jointing material and accessories. Tender No. P&S25.01,187-A; bid deadline April 15. Water Wing, Lahore Improvement Trust, Lahore. Bid documents available at above address at $54.70 airmail.

Iron, steel foundries

• **33200—INDIA** — 10,600 heat resistant steel casings for super heater coils—50% chromium and 50% nickel suitable for flue gas and fuel oil for 2 x 210 MW boilers. Tender No. SP:314 0089E; bid deadline May 20. Bharat Heavy Electricals Ltd., Tiruchirapalli 620014, India. Tender documents available from Iron and Steel Program, BDC, U.S. Department of Commerce, Washington, D.C. 20230, 202-967-2438.

Nonferrous rolling and drawing

• **33500—NEPAL**—Supply of ACSR conductor code "panther" for 132 KV transmission line. Tender No. 1022; bid deadline April 7. Department of Electricity, Ministry of Water and Power, Durbar Marga, Kathmandu. Specifications available at above address or from Lahmeyer International GMBH, D-6, Lyoner Strasse 22, P.O. Box 710230, Frankfurt 71, West Germany, at 180 Nepalese rupees or 40 deutschemarks.

• **33500 — TURKEY** — Jumper wire, 1,000 Km. Two each 0.60 dia. tinned electrolytic copper conductors, with white PVC insulation, spiral wound cotton thread sleeved, cellulose acetate varnished overall. Bid deadline April 8. Specifications available at $12.50 from Modern Translation Bureau, Karanfil Sokak 49/21, Yenishehir, Ankara.

Construction, mining, materials handling machinery, equipment

• **35300—MALAYSIA**—Kuching Port Authority invites tenders for supply and delivery of one new truck crane, lifting capacity 30 long tons, with option for purchaser to buy one additional unit at time of tender acceptance. Delivery at Tanah Puteh, or Pending, Kuching Port, Kuching, Sarawak, before Sept. 30. Three sets of tender documents will be supplied upon deposit of M$1,000. Tenders, in triplicate, shall be sent to Chairman, Kuching Port Authority, Kuching, Sarawak, by April 15.

General industrial machinery

3563110—AUSTRIA—Rotation compressors (oilsealed), compressors (oilfree), vanetype & screwtype compressors. Medium-sized importer (agent) mfr. for machine tools, spare parts, special machines, etc. Capable repair service. Agency for Austria, Europe (incl. Eastern & Southeast Europe) & Arab countries. Quote c.i.f. Terms of payment—Open account. Reply to—Mr. Gorischegg, Jr., Dir., Gorischegg G.M.B.H., Gorischegg Gasse 4, POB. 60, A-2100 Korneuburg. Tel. 02262-2040.

TOP Service Culls Leads At Exhibition In Mexico

During a recent exhibition of process control instruments at the U.S. Trade Center in Mexico, U.S. Embassy Commercial Officers operated a Trade Opportunities Program (TOP) booth, providing visitors with information on U.S. equipment suppliers outside of the area of instrumentation.

The service generated 18 requests from Mexican businessmen seeking products they wish to buy or represent, and two inquiries by Mexican industrialists seeking U.S. partners in possible joint ventures. The trade opportunities were then telexed to Washington, matched by Commerce's computer with TOP subscribers' sales interests, and mailed to the appropriate U.S. suppliers.

To subscribe to TOP, write: Trade Opportunities Program, Room 2321, U.S. Department of Commerce, Washington, D.C. 20230; phone 202-967-2665, or contact any Commerce District Office.

3564531—JAPAN—Air washers, dust collection & air purification equip. Est. annual purchase $20,000. Plans distrib. item to leading factories throughout Japan. Specializes in rubber belts, environmental protection systems, etc. Annual sales $27 million. Bank ref.: Mitsui Bank, Osaka Branch. Reply to—Mr. K. Nobiraki, Mgr., Nitta Belting Co., Ltd., 172 Ikezawa-cho, Yamato-Kohriyama City, Nara 639-11. Tel. 07435-6-2021; telex. 5522788 Nitanrj.

• **35670—INDIA**—Crucible Morgan Super Machine Salamander Type T.P. 12 or equivalent, capacity ½ ton (1,120 lbs.) suitable for LLP Axis Oil Fired Morgan Furnace HLP. Bid deadline April 15. Directorate General of Supplies and Disposals, Jeevan Tara Bldg., Parliament St., New Delhi 110 001. Tender No. P/107/22/360, available from India Supply Mission, 2536 Mass. Ave., NW, Washington, D.C. 20008. (202-265-5200). Tender fee $1.50.

Office, computing, accounting machines

• **35700—IRAQ**—Directorate of Contracts and Purchases, Ministry of Defense, Baghdad, has issued Tender No. ORD/42/75 for supply and delivery of 250 platform scales, 250 Kgs capacity. Bid deadline April 10. Tender funded by government.

3574341—JAPAN—Computerized bank teller machines (on-line automated cash dispensing & depositing terminals which customer uses by inserting card & pressing buttons.) Buyer, one of Japan's leading commercial banks, is based in Nagoya. Has 205 branches nationwide & deposits exceeded $10 billion in 1974. Has already installed computerized on-line cash dispensing machines in branch offices. Seeking more sophisticated cash dispensing machines that can also handle cash deposit, payments to & from checking or credit card accounts, etc. Requires service for machines be available in Japan within 12 hrs. of failure. Has requested it be furnished with brochures directly by U.S. mfrs. of above machines. Reply to—Mr. Atsushi Takeuchi, Mgr., Systems & Operations, Admin. Dept., The Tokai Bank, Ltd., Head Office: 2421, Nishiki 3-Chome, Nakaku, Nagoya 460. Cable Tokaihonbu Nagoya; Phone 052-211-1111.

Electric transmission, distribution equipment

• **36110—IRAN**—The Telecommunications Board of Iran, Kourosh Kabir Ave., Bisim Pahlavi, Tehran, has issued Tender No. 53/63 for 300 dynamometers. Bid deadline May 6. Tender documents may be obtained from above address for about $7.50.

• **36110—COLOMBIA** — ISA-Interconexion Electrica S.A., Calle 37 No. 8-43, Piso 10, Bogota, has issued Tender No. Licitacion CH-120 for supply and installation of electricity flow meter system, including demand meters, watt-hour meters, magnetic tape registers, and metal boards and accessories. Bid deadline April 7. Specifications available at above address for $100.

Communications equipment

• **36600—TURKEY**—Supply of wire carrier station and repeater equipment operating on telephone wire lines, for communication between railway stations. Bid deadline March 17. Further information, Todd Isletmesi Genel Mudurlugu, Merkez Alim ve Satim Komisyonu Baskanligi, Ankara (State Railways Administration). Bidding specifications, Modern Translation Bureau, Karanfil Sokak 49/2, Yenishehir, Ankara. Cost is $34, checks must accompany orders.

• **36600—ETHIOPIA**—The Telecommunications Board of Ethiopia (TBE), P.O. Box 1047, Addis Ababa, has issued Tender No. 2/75 for supply and installation of international telephone exchange to existing 4-wire national automatic transit exchange. Bid deadline May 5. Tender document available from above address for $37.50.

• **36600—INDIA** — The Posts and Telegraphs Directorate, Parliament St., New Delhi 110001, has issued Tender No. 12-118/74-MMD for supply of 12 MHZ coaxial line and multiplexing equipment required for (a) Ahmedabad-Bombay (576 km); and (b) Madras-Thana (1210 km). Bid deadline April 22. IDA financed. Documents available for $2.74 per set from Assistant Director General (Imports), Room 514, above address.

• **36600—BURMA**—The Myanma Oil Corp., 604 Merchant St., Rangoon, has issued Tender No. 1(T)EL-MOC/LPTO/(74-75)CAP for supply of one RF output single sideband transceiver with frequency range of 3 to 15 MHZ, complete with accessories. Bid deadline April 4. Copy of specifications available, when received, on short-term loan basis to firms located in U.S. from Science & Electronics Div., BDC-446, Room 1001, U.S. Dept. of Commerce, Washington, D.C. 20230, 202-967-2939.

• **36610—COLOMBIA**—The Empresas Municipales de Buga, Calle 5 No. 12-13, Buga, Valle, has issued Tender No. 01-75 for telephone equipment to increase present line capacity from 2,800 to 5,000. Also included are a 5,000 line exchange, 2,500 table telephones and 210 coin operated telephones. Buyer requests option of acquiring additional 2,000 line exchange in 1978. Bid deadline May 12. Specifications may be obtained at above address for $103.

• **36610 — VENEZUELA** — The C. A. Nacional Telefonos de Venezuela (CANTV) Apartado 1226, Caracas will soon call bids for supply of coaxial cable required to link radio and multiplexing systems between cities of Caracas, Barquisimeto, Valencia, and Acarigua. Interested companies contact Dr. Evaristo Pilo at above address.

• **36620—BURMA** — The Department of Civil Aviation, 104 Strand Rd., Rangoon, has issued Tender No. LA NYA NA/155/SA THA YA 495 for supply of one transistorized HF I.S.B. Radio with frequency range of 2,000 to 29,999 MHZ; 10 transistorized V.H.F. transmitters and receivers; 6 fully transistorized low power non-directional radio beacons; one 30 KVA auxiliary diesel generator; one 10/15 KVA auxiliary diesel generator, etc. Bid deadline April 30. Copy of specifications available on short-term loan basis to firms located in U.S. from Science & Electronics Div., BDC-466, Room 1001, U.S. Dept. of Commerce, Washington, D.C. 20230, 202-967-2939.

• **36620—COLOMBIA**—The Instituto Nacional de Radio y Television, Inravision, Avenida Eldorado, Of. 308, Bogota, has issued Tender No. 7 de 1975 for supply and installation of 3 TV 100 watts translators in VHF band. Bid deadline April 9. Specifications available at above address, $20.

• **36620—JAMAICA**—Office of the Equipment Specialist, World Bank Project, Ministry of Education, P.O. Box 498, Kingston, is seeking equipment for educational broadcast television center. Bid deadline May 31.

• **36620—JAMAICA**—The Ministry of Education, P.O. Box 498, Kingston, is requesting tenders for supply of equipment for TV broadcasting unit, teacher training college, trade training centers, and 38 secondary schools. Further information may be obtained at above address.

• **36620—PAKISTAN**—The Telegraph and Telephone Directorate General, Zero Point, Islamabad, has issued Tender No. PUR.21-21-74/803, for supply and installation of two separate microwave systems in 2 or 7 GHZ band. Bid deadline May 6. Specifications available on short-term loan basis to firms located in U.S. from Science & Electronics Div., BDC-466, Room 1001, U.S. Department of Commerce, Washington, D.C. 20230, 202-967-2939.

• **36620—TURKEY** — The TRT Kurumu Genel Mudurlugu, General Evrak Mudurlugu, Ankara, is seeking four mobile radar broadcasting stations consisting of transmitter, studio, and control room, service equipment, and antennas. Bid deadline April 21. Bidding specifications in English may be obtained from the Modern Translation Bureau, Karanfil Sokak 49/2, Yenishehir, Ankara, for $12.50.

• **36620—HONG KONG**—The Secretary, Central Tender Board, Colonial Secretariat, Central Government Offices, Lower Albert Rd., has issued Tender No. PT/87/74, Supplier A-26435 for development, supply and installation of two computer-assisted command and control systems to meet requirements for patrol police officers. Bid deadline April 4. Specifications available on short-term loan basis to firms located in U.S. from Science and Electronics Division, BDC-466, Room 1001, U.S. Dept. of Commerce, Washington, D.C. 20230, 202-967-2939.

Electronic components, accessories

36700—TURKEY—The TRT Kurumu Genel Mudurlugu, Genel Evrak Mudurlugu, Ankara (Turkish Radio-Television Association), has issued a tender for 8 each communication tape recorders: coplanar, reel to reel, casette or cartridge type recorders and other accessories; 12 each communication tape reproducers and accessories. Bid deadline April 10. Bid specifications in English may be obtained from Modern Translation Bureau, Karanfil Sokak 49/2, Yenishehir, Ankara, for $21.

Motor vehicles, motor vehicle equipment

37100—INDIA — Supply of truck tractor (6x4) capable of pulling 60-ton low bed semi-trailer. Tender No. 1573/BPO/120024/A-3544. Bid deadline April 21, financing by World Bank loan free resources. Tender documents available from Chief Purchase Officer, Beas Purchase Organization, Talwara Township — 144216, District Hoshiarpur, Punjab, India. India Supply Mission reference number CDN/ENQ/329.

Engineering, laboratory, scientific, research instruments

• **38100—ALGERIA**—The Division Engineering et Developpement, Sonarem, 1, rue Hameg Idir, Clinq-Maisons, El Harrach, Algiers, has isued Tender No. 11 for supply and installation of technical and scientific materials and equipment for: chemical and analytical laboratory; microphotography and other reproduction; laboratory for valorization and treatment of ores; repair shop; and radio-active cells analysis by physical proceedings. Bid deadline April 25. All specs in metric and correspondence in French, Copy of specifications available on short-term loan basis to firms located in U.S. from Science & Electronics Div., BDC-466, Room 1001, U.S. Dept. of Commerce, Washington, D.C., 202-967-2939.

• **38110—IRAN**—General E. Riahi, Chairman and Managing Director, Persian Gulf Fisheries Co., Amir Abad Ave., North Hamedan St., Tehrah, is seeking necessary tools and equipment for marine biology laboratory and oceanographic research work. Interested firms are invited to send catalogs and details to above address.

Instruments for measurement, analysis and control

• **38200—INDIA**—The National Coal Development Corporation Ltd., Darbhanga House, Ranchi—834001, Bihar, India, has issued Tender No. COSP/S-IV/PSKN/Methanometers/74-R for 44 methanometers for use in tropical country in underground. Ambient temperature 45 degree C. Bid deadline March 30. Copy of specifications available to firms located in U.S. from Science & Electronics Div., BDC-466, Room 1001, U.S. Dept. of Commerce, Washington, D.C. 202-967-2939.

• **38200—THAILAND** — The Purchasing Division, Provincial Electricity Authority, 200 Ngarmwongwaan Rd., Bangkhen, Bangkok 9, has issued Tender No. PEA-L-17/1975 for supply of 300 kilowatt-hour meters, three-phase, four-wire connection, etc.; 300 Jukiwatt-hour meters for connection to current transformers, etc.; 450 kilowatt-hour meters for connection to instrument transformers, etc. Bid deadline March 31. Project financed by PEA budget. Full particulars available at above address for $35 per set.

• **38210—INDIA**—The Bhabha Atomic Research Centre, Directorate of Purchase & Stores, 111 Floor, Mohatta Bldg., Palton Road, Bombay 400001, has issued Tender No. PDN/PPED/MIA/311 for electronic differential pressure transmitters for use in instrumentation at atomic power project. Bid deadline April 3. Copy of specifications available on short-term loan basis to firms located in U.S. from Science & Electronics Div., BDC-466, Room 1001, U.S. Department of Commerce, Washington, D.C. 20230, 202-967-2939.

Surgical, medical, dental instruments

• **38400—SRI LANKA**—The Department of Health, 355 Deans Rd., Colombo 10, has issued a tender for supply of approximately 470 dozen hypodermic syringes graduated to various sizes. Bid deadline April 1. Interested bidders may obtain tender documents from Embassy of Sri Lanka, 2148 Wyoming Ave., NW., Washington, D.C. 20008.

• **38410—QATAR**—The Ministry of Agriculture, P.O. Box 630, Doha, Qatar is seeking four mobile veterinary units. Must be self-sufficient in terms of water and electricity. Interested firms should contact Dr. Ieftikhar Ahmed, at above address, providing information on price, specifications, and delivery time.

Ophthalmic goods

• **38500—IRAQ**—The Directorate of Contracts and Purchases, Ministry of Defense, Baghdad has issued Tender No. ORD/40/75 for supply of 100,000 spectacles for snowy Ardas; 5,000 spectacles for anti-aircraft gunners, yellow color preferred; 2,000 spectacles for motorcyclists; 6,000 spectacles for armored vehicle drivers. Bid deadline April 7. Tender funded by government.

Scrap & waste materials

50930XX — JAPAN — Steel scrap. Reply to—Mr. S. Katayama, Pres., United Steel Co., Palace Bldg., 1-1 Marunouchi 1-chome, Chiyoda-ku, Tokyo 100. Cable Hymanmikel Tokyo; tel 03-211-6856. Direct sale & agency.

50930XX—FRANCE—Waste paper. Large

waste paper collecting agency founded in 1960; employs 91; capital of 800,000 francs; monthly sales 3 million francs; English spoken; sales territory, misc. countries; financial references good; bank, Banque Nationale de Paris, 93390 Clichy. Reply to—Mr. Marcel, Mgr. Dir., Centre de Dechets Industriels, 8, Rue Babeuf, 93380 Pierrefitte. Telex: 62746; phone: 822.22.00.

50930XX — PAKISTAN — Steel scrap (remeltable) in the following description and quantity: steel scrap HMS number 1, 75 percent and number 2, 25 percent, according to ISIS code number 200 and 203. Quantity 10,000 tons. Value approximately $500,000. Buyer is medium size importer and indenting agent of power and telephone cables, road construction machinery, grinding media for cement industry, fire bricks and paper bags. Presently imports from U.K., West Germany and Yugoslavia. Wishes to import for sale to others. Also interested in long-term relationship and agency representation. Annual sales potential estimated at 100,000 tons. Marketing territory all Pakistan. Requests C & F quotations against L/C. Firm's annual sales $250,000. Employs 12 including 4 salesmen and 3 technical personnel. Reply to—S. E. Hyder, Managing Dir., Hydersons Pakistan, 2nd Floor, Alfrid Center, Moulvi Tamizuddin Khan Rd., Karachi. Cable: "Hydersons" Karachi, telephone: 511228.

50930XX—KOREA — Pvc scrap. Monthly requirement: 200 m/t. Wishes receive quotation & scrap sample. Subject firm is manufacturer of Pvc products, including Pvc soft sandals, Pvc film, toothbrushes, Pvc corrugated sheet. Sales in 1973 and 1974 reported at W800 million and W1,000 million, respectively. Previously imported Pvc scrap from Japan. Employs 900. Reply to—Mr. Kim Won-Ho, Mgr., Trade Section, Uil Chemical Industrial Co., Ltd., CPO Box 713, Seoul 100. Cable: Oratorio.

Transformers Sought By Panama

The Instituto de Recursos Hidraulicos y Electrificacion (IRHE), Poli Bldg. at Justo Arosemena Ave. & 27 East St., Panama City, has issued a bid for supply and delivery of two mobile transformers. Tentative date for delivery of bid documents is April 15. The complete set of documents may be obtained from the Purchasing Department of IRHE, or may be requested by mail at Apartado Postal 5285, Panama 5, for a non-refundable price of 15 balboa. IRHE has received an IBRD loan in various currencies equivalent to $30 million towards the foreign cost.

Equipment For The Handicapped

Zeme Salon International des Materiels, des Techniques Modernes et de l'Environment Social pour l'Aide a la Redaptation (READAPT) is inviting U.S. participation in an exhibition of equipment for the handicapped in Paris Oct. 9-12. Contact Madame Favier, Socfi-Wagons-Lits/Cook, 7, rue Michel-Ange, 75016 Paris.

Bolivia Needs Drill Casings

Bolivian Petroleum Co., Yacimientos Petroliferos Fiscales Bolivianos (YPFB), Casilla 401, La Paz, is in urgent need of petroleum drill casings. Quote either: FAS, Port; FOB, Vessel; C&F, Buenos Aires. A list of YPFB's casing requirements in Spanish is available from U.S. Department of Commerce, Trade Opportunities Program, Rm 2321, Washington, D.C. 20230. Tel: 202-967-2251.

Representations

Foreign private firms are interested in agency agreements and/or distributorships for these products.

Converted paper, paperboard products

26410 — 26420 — 35690 — 35790 — AUSTRIA—Labels; envelopes; envelope stuffing machines; letter folding machines; postage meters; labeling machines. Inquirer is medium-sized firm for address data processing with computing center of its own. Seeks agency for Austria & Comecon countries. Quote c.i.f. Terms of payment: open account. Correspondence in English & German. Reply to—Ing. Enderle, Mgr., Adressen Datenverarbeitung Gmbh, Goldschlagstrasse 107, A-1150 Vienna. Tel: 92 33 33.

Construction, mining, materials handling machinery, equipment

3531XXX — AUSTRIA — Tractor shovel loaders, wheel & tracklaying types; scrapers, graders, dozers, rippers, rooters, ditching & trenching equip.; dredging machinery, self-propelled ditchers & trenchers; related earthmoving & excavating equip. Inquirer interested in excl. distributorship agreement for Austria & neighboring countries with mfr. of complete line of earthmoving equip. As part of internal reorganization now under way, this very large mfg. corp. (producing tractors, trucks, motorcycles, bicycles, farm machinery, ball bearings, firearms, etc.) is forming separate trading division to take on distributorships in selected lines supplementing company's production program. After conducting market study, firm decided to concentrate on earthmoving equip. Co. estab. 1864, employs staff of 17,500. Documented offers urgently requested. Reply to— Friedrich Pulz, Dir., Steyr-Daimler-Puch A.G., Kaerntnerring 7, Postfach 62, A-1011 Vienna. Cable Steyrwerke Vienna; Tel: 52 35 81.

Special industry machinery

3555XXX—AUSTRIA — Photo composing equip., machines for automatic development of offset printing plates; printing plates; photoengraving machines; typesetting machines; photographic typesetting machines; matrices for phototypesetting machines; lithographic presses; printing presses. Seeks excl. agency arrangement for Austria & entire Comecon area. Supplies machinery, equip., & materials to printing & graphic arts industry. Leading firm in its field. Represents Chemant (chemical etching) & Bostich (staplers) in Austria & E. Europe, also W. German Heidelberger Druckmaschinen. Documented offers with technical information & price quotations (ex-factory) requested. Reply to—Mr. Minarik, Berthold & Stempel Ges.M.B.H., Gruengasse 16A, A-1052 Wien. Cable: Bertostemp Wien; tel: 577657.

General industrial machinery

35690XX—CANADA—Internal combustion burner for wood waste, such as sanders dust, mouler shavings, sawdust from millwork plants & sawmills. Not interested in "beehive" type burner. Distributor of industrial equip. & supplies to forestry, mining & metalworking industries. Provides full service facilities. Represents several U.S. firms in industrial equip. field. With several branches of its own & 4 of associated concern, sales should develop satisfactorily. Reply to—G. W. Gulbransen, V.P., Akhurst Machinery Ltd., 316 W. 2nd Ave., Vancouver, B.C. V5T 4E8. Tel. 604-876-4191. Excl. agency.

Electric lighting, wiring equipment

3647029—AUSTRALIA—Self activating life preserver lights for attachment to life preservers. Must be approved by U.S. Coast Guard. Established over 50 yrs.; operates throughout Australia. Previously buying from U.K. but supplies no longer available. Reply to—Mr. D. Smith, Mgr., Harry West Pty. Ltd., Duke St., East Balamin, N.S.W. 2041. Tel. 82 0108.

Antique, secondhand stores

5931XXX—BANGLADESH — Secondhand clothing. Exclusive agency franchise sought. Reply to—M. A. Hamid, Proprietor, Hamid Agency, 52 Farazipara Rd., Khulna. Cable Hamigency, Khulna; phone 4616.

Motion picture production, distribution

7813XXX — AUSTRALIA — Exclusive distributorship—Movies, short subjects, cartoons, no special subject. Distributor desires film for showing in clubs and other exhibitions. Kerr plans to visit U.S. at end of year. Reply to—Roger Kerr, Man. Dir., Kerr Film Services, 235 Smith St., P.O. Box 469, Penrith, N.S.W. 1750. Tel. 21 5984.

Future Construction Abroad

COLOMBIA — The Colombian National Water Supply Agency, INSFOPAL, Centro Administrativo Nacional (CAN), Bloque 2, Ofc. 321, Bogota, plans a **series of water supply and sewerage projects** from 1975 to 1979 in eight cities with populations between 50,000 and 700,000; Barranquilla, Cartagena, Cucuta, Ibague, Pasto, Popayan, Valledupar, and Villavicencio. Projects in Valledupar and Villavicencio will not include sewerage works. In addition, project will provide some 30 small communities with additional ground water supplies and assist in installation of about 100,000 water meters in systems operated by INSFOPAL as well as provide staff training and management assistance to INSFOPAL. Total project est. at $52.9 million, including funds for managerial assistance and training of Water Supply Utilities Staff. Foreign exchange component est. at $16.7 million, and INSFOPAL has applied for $27 million loan from World Bank. Except for civil works under $100,000, all contracts will be placed by means of international competitive bidding.

IRAQ—The Iraqi Government is inviting bids on a complete **drainage and sewage scheme** for the city of Amara, located 380 km. southeast of Baghdad. Project is combined system for storm and sanitary flow and will include sewer network, pumping stations, and treatment plant. Director General, Sewage Board, Ministry of Municipalities, Baghdad. Deadline for bids is April 28.

IRAN—Morteza Vaziri, Director of Machine Made Bread of the Cereal, Sugar and Tea Organization, 2/107 Vessal Shirazi Ave., Tehran, seeks U.S. suppliers of **machinery for manufacturing the local flat bread known as "Barbary".** Has already purchased two such plants from Germany, but needs more. Wishes to change from old system of small hand-operated bakeries to large-scale automated machine. Copy of specifications avail-

able from U.S. Department of Commerce, Trade Opportunities Program, Rm 2321, Washington, D.C. 20230. Tel: 202-967-2251; they should be regarded as guidelines rather than firm. No deadline. Send proposals, catalogs, brochures, etc. to American Embassy, 260 Ave. Takti Jamshid, APO New York 09205, Attn: Commercial Attache, for transmittal to above agency.

PAKISTAN—Expansion of cement industry is moving ahead rapidly. Financing for some projects will be provided by Iran and Saudi Arabia. Expansion continues to offer major export opportunities for U.S. firms. Direct inquiries to Mr. S. M. Alam, Chairman, State Cement Corp. of Pakistan Ltd., 3rd Fl., WAPDA House, Lahore. OPIC.

PAKISTAN — Further development of Karachi port, including four additional dry cargo berths, an oil tanker berth and other construction works, is being financed by two loans from the World Bank group totaling $34 million in foreign exchange. Total cost projected at $70 million. Officials of Karachi Port Trust, Karachi 2, the implementing agency, have advised that two U.S. firms have been prequalified to bid on the oil tanker berth construction project: Raymond International and Santa Fe Engineering Co. Major opportunities still exist for sale of port and port maintenance equipment, especially a hopper dredger. OPIC.

SOUTH AFRICA—South African Railways (SAR), Johannesburg, plans to build a third **oil pipeline** from Durban to Johannesburg. This line, like the first (which is running near capacity), will carry refined petroleum products. Second line (completed in 1969) carries crude oil. Has yet to be approved by South African Parliament, but SAR is proceeding with plans for aerial survey of route, to run from Durban Harbor to storage tanks at Langlaagte, Johannesburg. Will supplement existing products' line but not follow exactly same route. Expected to run underground for about 800 kilometers, with 300-millimeter diameter pipes. Should cost U.S.$123 million, be completed late 1976.

EL SALVADOR—The Ministry of Public Works invites **roadbuilding contractors** from eligible I-ADB member countries to bid on construction of A.) 3 km. of road surrounding the San Salvador Central Market building, B.) 5 km. of road parallel to Autoqista Sur south of San Salvador, C.) 16.3 km. of highway from Placitas to San Rafael Oriente-CA-2, and D.) 7.2 km. of highway from Jiquilisco to Puerto El Truinfo. Deadline for A and B is April 1, and for C and D April 28. Tender regulations and requirements available from Proveeduria Especifica de Obras Publicas, 12 Calle Poniente 228, San Salvador. To obtain copies of road plans and specifications, send a roll of blueprint copy paper (Ozalid), 50 meters long and 1.1 meter wide to same address.

IRAQ—Bids on a tender by Iraqi Government being accepted for first stage of the **Kerbala sewage scheme,** which will include 5 km. of trunk sewers, 16 km. of main sewers, and 68 km. of sewers with manholes, house laterals, and other associated works, as well as four sewage pumping stations and a treatment plant. Write Director General, Sewage Board, Ministry of Municipalities, Baghdad or cable Majari Baghdad. U.S. firms are urged to contact Sewage Board at once and request to be put on mailing list for all future tenders. Bid deadline April 28.

IRAQ — The Iraqi Government has announced tender for complete **synthetic detergent plant** with planned output of 4 tons powder per hour. Interested parties wire Iraqi buyer, Leon Khnano, Head of Materials Management, Zuyout Baghdad, Telex 2221, for tender documents by April 1, and airmail company brochures to him at The General Co. for Vegetable Oils, Zuyout, Iraq. Written transmittal should include request to be placed on Iraqi list to receive future direct notification of tender calls and indication whether U.S. supplier prepared to travel to Iraq. Successful bidder to train four company employees for 8 weeks in U.S.

IRAQ—State Organization for Construction Industries, Ismail Al-Tamini Bldg., Saadon St., Baghdad, (Cable: STOCI Baghdad), requests U.S. firms capable of setting up **turnkey plant to produce hydrated lime** to supply product literature.

PARAGUAY—Firms interested in bidding on **improvement and paving of 103 kilometers of road** in Southern Paraguay may obtain prequalification documents from Direccion General de Vialidad, Minsterio de Obras Publicas y Com., Calle Oliva Esquina Alberdi, Segundo Piso, Asuncion. Deadline is April 15. Work consists of 76 km. of Route 6 from Encarnacion to Pirapo and 27 km. from Mbocayaty to Colonia Independencia. Estimated value $14 million, IBRD-financed. Call for bids will be announced in May. OPIC.

HONG KONG—Firms interested in constructing and operating a **cable car** should submit bids and a cashiers check for HK$1 million before April 11 to Chairman, Central Tender Board, Colonial Secretariat, Hong Kong. Copies of tender notice with particulars available from Major Export Projects Division, Room 3056, U.S. Department of Commerce, Washington, D.C. 20230.

TANZANIA—East African Harbours Corporation invites experienced contractors interested in tendering for construction of a **lighter wharf** at Tanga to prequalify with consulting engineers, Bish and Partners B.V. Applicants required to furnish prequalification documents including detailed information about company, names of directors and/or partners, registration, details on paid up capital, affiliations, bankers, turnover figures during last 5 years, and particulars of works similar to those to be tendered, to both of following addresses: Consulting Engineers, Bish and Partners B.V., 220 Wassenaarseweg, The Hague, Netherlands and Consulting Engineers, Bish and Partners B.V., P.O. Box 1821, Dar Es Salaam. Deadline March 31. Financed by IBRD, work consists of constructing 240-meter quay wall in front of old loading facilities for lighters and ancillary works. OPIC.

TUNISIA—Supply and installation of conduit pipes, civil engineering, and construction for the Sfax **water supply system.** Project is broken down into three lots: (1) 155,000 meters of conduit pipes (supplier to indicate whether iron or concrete); (2) miscellaneous castings, fittings, joints, valves, and meters; and (3) transportation and laying of 246,000 meters of conduit pipes, civil engineering, and construction work. The $23 million financing has been included in a larger IBRD loan for improvements in water supply systems. Sealed bids should be sent to Societe Nationale d'Exploitation et de Destribution des Eaus (SONEDE), 23 Rue Docteur Braquehaye, Montfleary, Tunis. Tender documents and specifications in French available from SONEDE against payment of 50 Tunisian Dinars ($1.14) for each of Lots 1 and 2 and 200 Tunisian Dinars ($456) for Lot 3. Deadline for bids is May 16.

The Overseas Private Investment Corp. (OPIC) offers political risk insurance to U.S. construction firms planning to submit bids on projects in certain developing countries, identified by the "OPIC" notation at the end of some items. For further information on OPIC's construction insurance program, write Information Officer, Overseas Private Investment Corp., Washington, D.C. 20527. Tel: 202-632-1854.

IRAQ—Continuous, automatic **soap plant** to process from curd stage to final shaped, wrapped bars. Interested U.S. manufacturers write Leon Khnano, Head of Materials Management, The General Company for Vegetable Oils, Baghdad; cable Zuyout Baghdad; or telex 221 Zuyout IK. Telex him soon as possible, requesting copy of tender documents (cost: 1 Iraqi dinar, or $3.38). Tender documents also available for review only with Ms. Cherie Loustaunau, Room 6015, U.S. Dept. of Commerce, 202-967-4441. Bids must be submitted by May 3.

ALGERIA—Turnkey plant in Akbou, eastern Algeria, to make shoes and related items such as soles, punches, glue, and packing fashionings. Submit bids by registered mail to Direction des Etudes, Sonipec, 100 Rue de Tripoli, Hussein-dey, Algiers (cable Tal Alger, Telex 52832) by May 15. Offers will remain valid 6 months past deadline. Correspondence must be in French and specifications in metric units. Tender documents in French can be obtained from above address for 200 Algerian dinars ($55.55). Copy also available for reference only with Ms. Cherie Loustaunau, Room 6015, U.S. Department of Commerce, 202-967-4441.

ALGERIA—Prequalification bids on **turnkey telecommunications network.** Includes supply, installation, and startup of three direct collecting telephone self-commutators for post and telegraph system and "pupitres dirigeurs" in Algiers, Mohammedia, and Bel-Abbes. Deadline is June 6 for bids, which must be in French and metric units, and include cash, credit terms, and financing. Variations in specifications acceptable. Offers remain valid for 180 days past bid deadline. Submit by registered mail to Monsieur le Chef du Bureau Administratif SES, VB, 8-eme etage, SNCFA, 21-23, Blvd. Mohamed V, Algiers. Copy of tender documents and blueprints in French available for review only with Ms. Cherie Loustaunau, Room 6015, U.S. Dept. of Commerce, 202-967-4441. Copies may also be ordered directly from above Algiers address for 170 Algerian dinars ($40).

Jordan Asks Project Bids

The Jordan Electricity Authority (JEA) has applied to international loan agencies for financing installation of an additional 33 MW steam turbine generating unit and all required auxiliaries, which is expected to be operable in May 1978. Stage I of the project is presently being implemented and consists of a two-33 MW unit installation to be operational by March 1976. Stage II consists of extending the facilities presently under construction to include necessary civil works and electro-mechanical equipment required for the new 33 MW steam unit installation. Bidders will be asked to quote both the electro-mechanical equipment portion and civil works portion. Bidding documents are available for a non-returnable fee of $300 from Kuljian Corp., 3624 Science Center, Philadelphia, Pa. 19104, Attn: Mr. E. H. McLatchy. Also send a copy of correspondence to General Manager, Jordan Electricity Authority, P.O. Box 2310, Amman. Bids due July 1.

☆ U.S. Government Printing Office: 1975, 582-687/18

Commerce Department Directory

Commerce Building, 14th Street and Constitution Avenue, N.W., Washington, D.C. 20230, (202) 783-9200

FREDERICK B. DENT, Secretary of Commerce

JOHN K. TABOR, Under Secretary of Commerce

SECRETARIAL OFFICERS

WILMER D. MIZELL, Sr., Asst. Secretary for Economic Development

GUY W. CHAMBERLIN, Jr., Acting Asst. Secretary for Administration

JAMES L. PATE, Asst. Secretary for Economic Affairs

BETSY ANCKER-JOHNSON, Asst. Secretary for Science and Technology

ROBERT J. BLACKWELL, Asst. Secretary for Maritime Affairs (Maritime Administration)

C. LANGHORNE WASHBURN, Asst. Secretary for Tourism (United States Travel Service)

KARL E. BAKKE, General Counsel

TILTON H. DOBBIN, Asst. Secretary for Domestic and International Business

HEADS OF OPERATING UNITS

ROBERT M. WHITE, National Oceanic and Atmospheric Administration

EDWARD D. FAILOR, Social and Economic Statistics Administration

JOSEPH E. CLARK, Acting, National Fire Prevention and Control Administration

ALEX M. ARMENDARIS, Office of Minority Business Enterprise

VINCENT P. BARABBA, Bureau of the Census

GEORGE JASZI, Bureau of Economic Analysis

C. MARSHALL DANN, Patent and Trademark Office

JOHN M. RICHARDSON, Acting, Office of Telecommunications

WILLIAM T. KNOX, National Technical Information Service

RICHARD W. ROBERTS, National Bureau of Standards

Domestic and International Business Administration

ALAN J. POLANSKY, Acting, Bureau of Resources and Trade Assistance

CHARLES W. HOSTLER, Bureau of International Commerce

SAMUEL B. SHERWIN, Bureau of Domestic Commerce

ARTHUR T. DOWNEY, Bureau of East-West Trade

LAWRENCE A. FOX, International Economic Policy

JOHN P. KEARNEY, Ombudsman for Business

WILLIAM A. NEWDICK, Acting, Office of Field Operations

DISTRICT OFFICES

ALBUQUERQUE, N.M., 87101, Room 316, U.S. Courthouse (505) 766-2386.

ANCHORAGE, 99501, 632 Sixth Ave., Hill Bldg., Suite 412 (907) 265-4597.

***ATLANTA,** 30309, Suite 523, 1401 Peachtree St., NE. (404) 526-6000.

BALTIMORE, 21202, 415 U.S. Customhouse, Gay and Lombard Sts. (301) 962-3560.

BIRMINGHAM, ALA., 35205, Suite 200-201, 908 S. 20th St. (205) 325-3327.

BOSTON, 02116, 10th Floor, 441 Stuart St. (617) 223-2312.

BUFFALO, N.Y., 14202, Room 910, Federal Bldg., 111 W. Huron St. (716) 842-3208.

CHARLESTON, W.VA., 25301, 3000 New Federal Office Bldg., 500 Quarrier St. (304) 343-6181, Ext. 375.

CHEYENNE, WYO., 82001, 6022 O'Mahoney Federal Center, 2120 Capitol Ave. (307) 778-2151.

***CHICAGO,** 60603, Room 1406, Mid-Continental Plaza Bldg., 55 E. Monroe St. (312) 353-4450.

CINCINNATI, 45202, 8028 Federal Office Bldg., 550 Main St. (513) 684-2944.

CLEVELAND, 44114, Room 600, 666 Euclid Ave. (216) 522-4750.

COLUMBIA, S.C., 29204, Forest Center, 2611 Forest Dr. (803) 765-5345.

***DALLAS,** 75202, Room 3E7, 1100 Commerce St. (214) 749-1515.

DENVER, 80202, Room 161, New Custom House, 19th and Stout Sts. (303) 837-3246.

DES MOINES, IOWA, 50309, 609 Federal Bldg., 210 Walnut St. (515) 284-4222.

DETROIT, 48226, 445 Federal Bldg. (313) 226-3650.

GREENSBORO, N.C., 27402, 203 Federal Bldg., W. Market St., P.O. Box 1950. (919) 275-9111, Ext. 345.

HARTFORD, CONN., 06103, Room 610-B, Federal Office Bldg., 450 Main St. (203) 244-3530.

HONOLULU, 96813, 286 Alexander Young Bldg., 1015 Bishop St. (808) 546-8694.

HOUSTON, 77002, 201 Fannin, 1017 Federal Office Bldg. (713) 226-4231.

KANSAS CITY, MO., 64106, Room 1840, 601 E. 12th St. (816) 374-3142.

LOS ANGELES, 90024, 11201 Federal Bldg., 11000 Wilshire Blvd. (213) 824-7591.

MEMPHIS, 38103, Room 710, 147 Jefferson Ave. (901) 534-3213.

MIAMI, 33130, Rm. 821, City National Bank Bldg., 25 W. Flagler St. (305) 350-5267.

MILWAUKEE, 53203, Straus Bldg., 238 W. Wisconsin Ave. (414) 224-3473.

MINNEAPOLIS, 55401, 306 Federal Bldg., 110 S. Fourth St. (612) 725-2133.

NEW ORLEANS, 70130, Room 432, International Trade Mart, 2 Canal St. (504) 589-6546.

***NEW YORK,** 10007, 41st Floor, Federal Office Bldg., 26 Federal Plaza, Foley Sq. (212) 264-0634.

NEWARK, N.J., 07102, Gateway Bldg. (4th floor) (201) 645-6214.

***PHILADELPHIA,** 19106, 10112 Federal Bldg., 600 Arch St. (215) 597-2850.

PHOENIX, ARIZ., 85004, 508 Greater Arizona Savings Bldg., 112 N. Central Ave. (602) 261-3285.

PITTSBURGH, 15222, 431 Federal Bldg., 1000 Liberty Ave. (412) 644-2850.

PORTLAND, ORE., 97205, 921 S.W. Washington St., Suite 521, Pittock Block. (503) 221-3001.

RENO, NEV., 89502, 2028 Federal Bldg. 300 Booth St. (702) 784-5203.

RICHMOND, VA., 23240, 8010 Federal Bldg., 400 N. 8th St. (804) 782-2246.

ST. LOUIS, 63105, Chromalloy Bldg., 120 S. Central Ave. (314) 622-4243.

SALT LAKE CITY, 84111, 1201 Federal Bldg., 125 S. State St. (801) 524-5116.

***SAN FRANCISCO,** 94102, Federal Bldg., Box 36013, 450 Golden Gate Ave., (415) 556-5860.

SAN JUAN, P.R., 00902, Room 100, Post Office Bldg. (809) 723-4640.

SAVANNAH, 31402, 235 U.S. Courthouse and Post Office Bldg., 125-29 Bull St. (912) 232-4321, Ext. 204.

SEATTLE, 98109, 706 Lake Union Bldg., 1700 Westlake Ave. North (206) 442-5615.

* Regional Offices

UNITED STATES
GOVERNMENT PRINTING OFFICE
DIVISION OF PUBLIC DOCUMENTS
WASHINGTON, D.C. 20402

OFFICIAL BUSINESS

POSTAGE AND FEES PAID
U.S. GOVERNMENT PRINTING OFFICE
First-Class Mail

U.S.MAIL

One sure way to be an informed business executive . . .

SUBSCRIBE TO Commerce Today

This information-packed biweekly magazine of the U.S. Department of Commerce gives you the facts from the experts on the economy, domestic and international business, energy management, and a variety of other subjects of vital interest to anyone in the business world.

Send your check or money order for $29.80 and the coupon below for a one-year subscription to Commerce Today

---

SUBSCRIPTION ORDER FORM

ENTER MY SUBSCRIPTION TO **Commerce Today**
at $29.80. Add $7.45 for foreign mailing. No additional postage is required for mailing within the United States and its possessions. For shipment to all foreign countries include additional postage as quoted for each periodical or subscription service.

☐ Remittance Enclosed **(Make checks payable to Superintendent of Documents)**

☐ Charge to my Deposit Account No.

Send Subscription to:

NAME–FIRST, LAST

COMPANY NAME OR ADDITIONAL ADDRESS LINE

STREET ADDRESS

CITY | STATE | ZIP CODE

PLEASE PRINT

MAIL ORDER FORM TO:
Superintendent of Documents
Government Printing Office
Washington, D.C. 20402